

The logo consists of the letters 'M' and 'W' in a bold, sans-serif font. The 'M' is black, and the 'W' is orange. The background is a dark blue gradient with a faint, light blue geometric pattern of overlapping lines and shapes.

***MAGNUM  
WORKSHOP***

***FACIAL REPORT***  
ADVANCED EDITION

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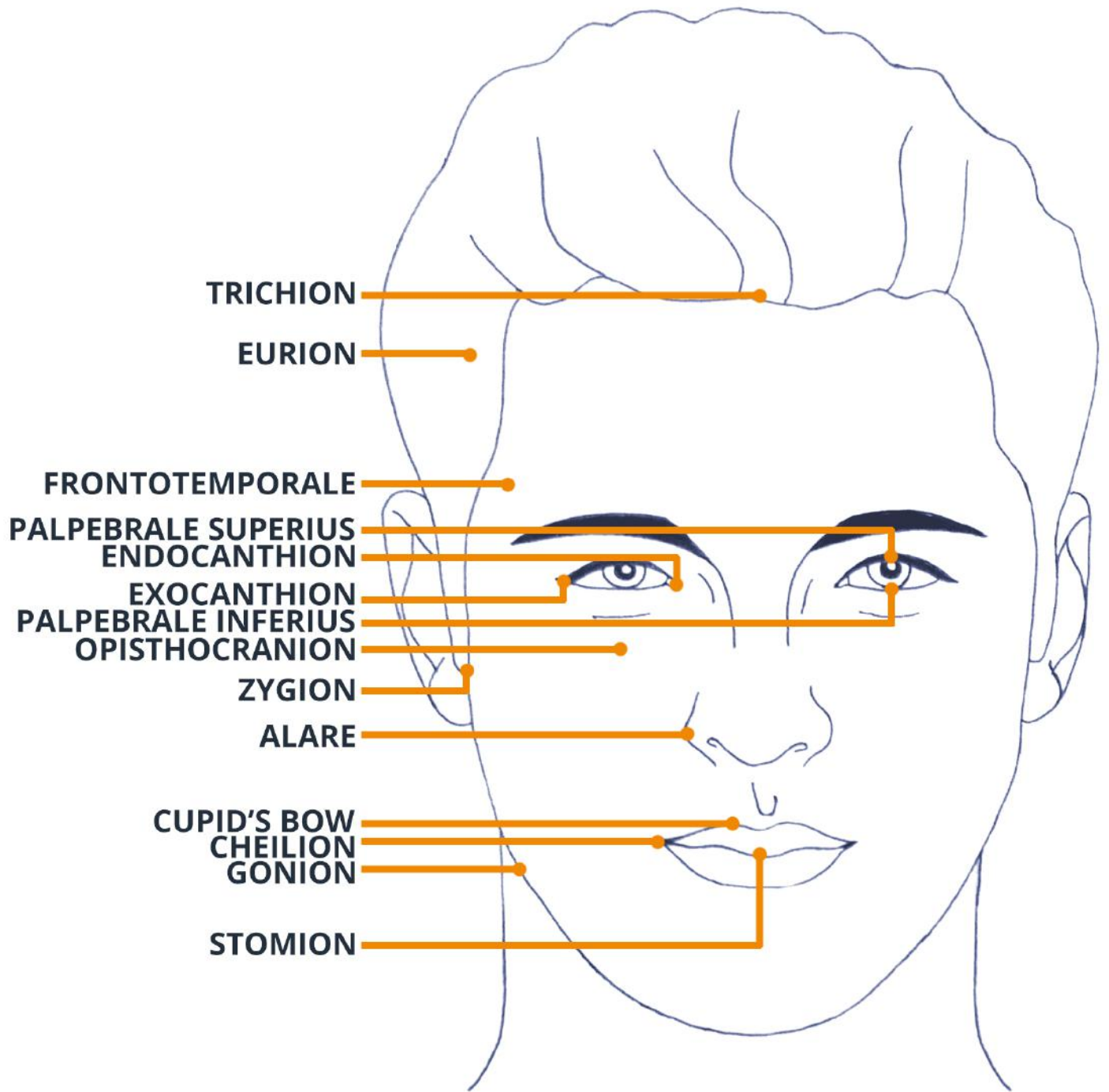
## Intro

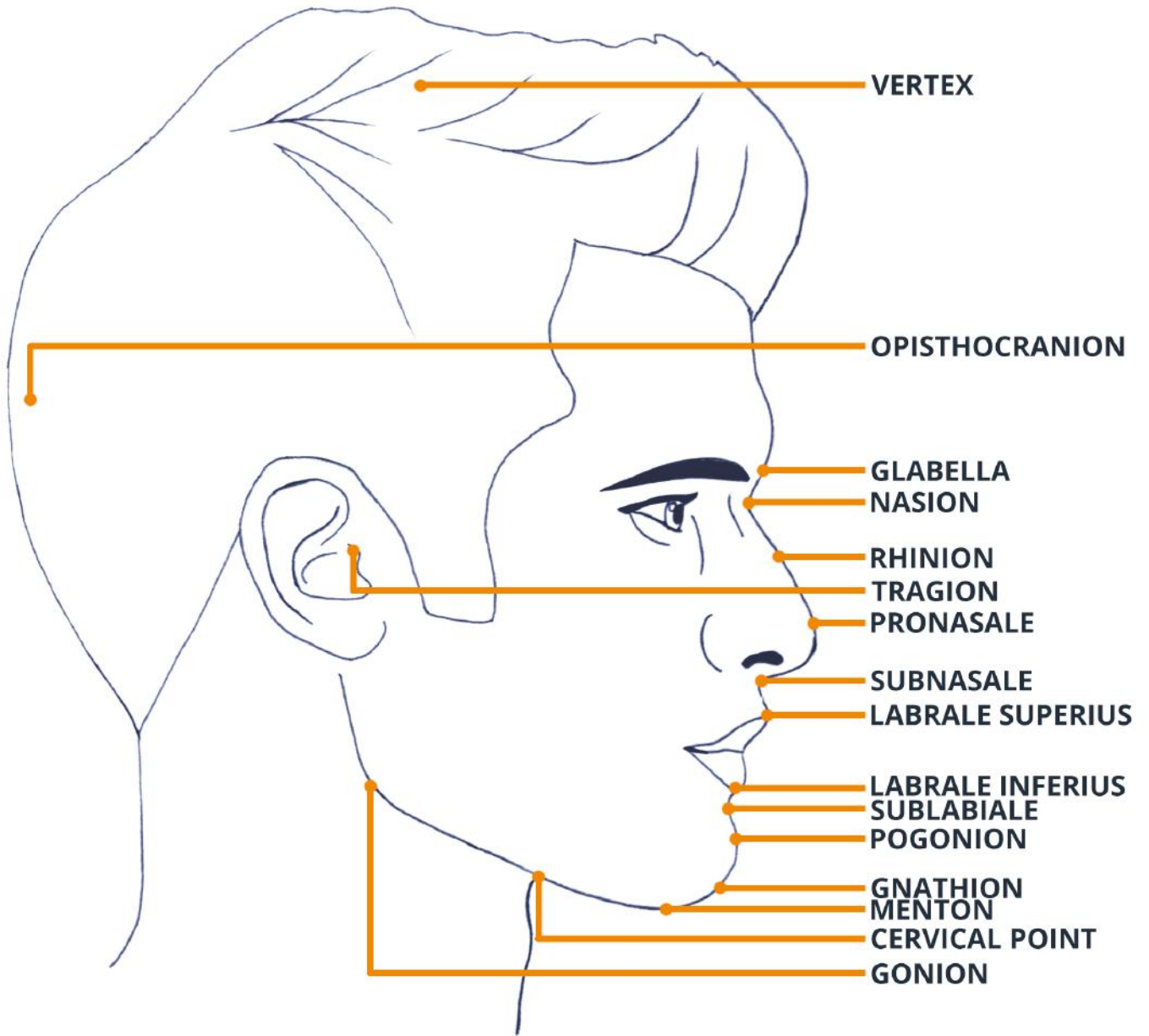
This report is meant to help increase your understanding of the respective strengths and weaknesses of your face. Most of the analysis is done via direct measurements of a photograph (photogrammetry) where possible and visual assessment where not. Keep in mind that this comes with inherent weaknesses that an in-person examination won't have, and that a consultation with a professional is necessary to confirm any findings.

Your facial measurements are compared to standardized norms for your sex and race that have been taken from cephalometric research data. Much of this data has been analyzed to fit what the researchers think the true average of the population is. If you don't fall into the 'normal' range, take it with a grain of salt, as these numbers don't necessarily represent what is normal or even attractive. You should expect many measurements to be out of the normal range, as even models don't fit every measurement perfectly. The report needs to be taken in as a whole instead of honing in on a specific measurement.

Attractiveness studies from the literature form the core basis of this report. However, many of the conclusions are based on our own internal research. Sources have been provided for further reading.

To best understand the report, use the following cephalometric landmarks on the next page as a reference:





**VERTEX**

**OPISTHOCRANION**

**GLABELLA**

**NASION**

**RHINION**

**TRAGION**

**PRONASALE**

**SUBNASALE**

**LABRALE SUPERIUS**

**LABRALE INFERIUS**

**SUBLABIALE**

**POGONION**

**GNATHION**

**MENTON**

**CERVICAL POINT**

**GONION**

# Glossary:

Medial: Toward the middle or center.

Lateral: Toward the sides.

Bilateral: On both sides.

Standard Deviation: A measure of variability. One standard deviation encompasses 68% of the data, two standard deviations is 95% and three is 99.7%. A data set with a low standard deviation is one where the values are close together and don't vary by much.

Z-Score: How far from the average a data point is in standard deviations. A positive z-score means a measurement is above average, and a negative z-score tells you how far below average the data point is. Keep in mind that the z-scores calculated in this report are a rough guess.

Weighted Score: A weighted score gives more points to more important features such as the jaw, eyes, and overall facial characteristics.

Cephalometry: The measurement of the human head via medical modalities such as x-rays.

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## Demographics

Sex: Male

Race: African

# Bilateral Symmetry

Symmetry is a cornerstone of facial aesthetics since it indicates developmental stability. But humans aren't perfectly symmetrical. A perfectly symmetrical face would result in an uncanny & unnatural appearance. However, high degrees of symmetry are the most attractive, and obvious asymmetries can have a huge impact on facial aesthetics. Many models have asymmetries. However, there is less leeway for certain asymmetries such as those around the eye area. On the other hand, the eyebrows (which are difficult to measure accurately) and lower regions of the face such as the jaw are known to be more asymmetrical.

In this report, we will measure the distance between symmetrical points in comparison to the facial midline. Horizontal and vertical symmetry will be assessed separately, with the degree of difference between the two points being expressed in millimeters. This report will not be able to detect subtle variations in asymmetries such as on smaller regions like the columella and philtrum. This report also doesn't take into account sagittal/transverse measurements. However, frontal measurements are an adequate indicator of asymmetry.

Zygion Symmetry	2.2 mm.
Exocanthion Symmetry	1.5 mm.
Endocanthion Symmetry	0.6 mm.
Palpebrale Superius Symmetry	1.4 mm.
Palpebrale Inferius Symmetry	0.6 mm.
Alar Symmetry	0.8 mm.
Cheilion Symmetry	1.9 mm.
Gonion Symmetry	2 mm.
Inner Eyebrow Symmetry	0.7 mm.
Eyebrow Tip Symmetry	1 mm.
Cupid's Bow Symmetry	0 mm.
Pupil Symmetry	0.9 mm.
Average Asymmetry	1.1 mm.
Average Weighted Asymmetry	1.2 mm.

The subject has no noticeable asymmetries.

The jaw appears symmetrical with no evidence of mandibular/maxillary canting.

# Cephalometric Averageness

Multiple studies show that average faces are perceived as more attractive, to the point that even babies respond the same way to average faces as they do to attractive faces e.g. by holding their gaze longer. This is presumably because average faces are the least likely to carry harmful mutations and are genetically diverse.

Measurement	Value	z-score	Measurement	Value	z-score
Nasofrontal Angle	130°	0	Physiognomical Face Height	17 cm.	-1
Nasal Tip Angle	67°	-3	Upper Face Height	5.7 cm.	-4
Nasolabial Angle	64°	-4	Lower Face Height	5.9 cm.	-3
Nasofacial Angle	39°	0	Midface Height	6.9 cm.	1
Nasomental Angle	129°	2	Nose Height	4.4 cm.	-1
Labiomental Angle	131°	0	Nasal Bridge Length	4 cm.	2
Angle of Facial Convexity	171°	1	Nasal Tip Protrusion	1.5 cm.	0
Angle of Total Facial Convexity	147°	1	Upper Lip Height	2.2 cm.	-3
Mentocervical Angle	92°	1	Lower Lip Height	1.8 cm.	-2
Bizygomatic Width	13.4 cm.	0	Vermillion Upper Lip Height	13.2 mm.	0
Bigonial Width	11.7 cm.	2	Vermillion Lower Lip Height	15.4 mm.	2
Nasal Width	4.3 cm.	2	Mandible Height	3.9 cm.	-2
Mouth Width	5.6 cm.	0	Intercanthal Width	3.1 cm.	-1
Philtrum Length	1.1 cm.	-3	Interpupillary Width	60.8 mm.	-2
Forehead Height 1	5.7 cm.	0	Outercanthal Width	86.6 mm.	-3
Forehead Height 2	7.1 cm.	3	Eye Fissure Width	27.9 mm.	-2

Total Averageness Score: 1.5

An averageness score of zero represents the most average face possible.

The subject is relatively average looking.

Total Weighted Averageness Score: 2.3

The subject has a relatively average face and should be considered attractive or at least have a good base for improving their facial aesthetics.



# Overall Skull & Face Characteristics

## Cephalic Index

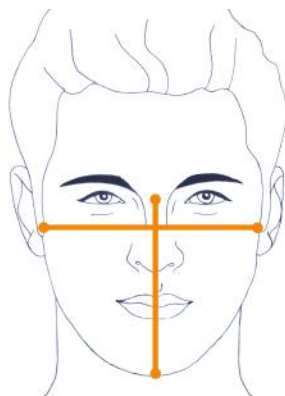
The cephalic index is a measure of the ratio between the head width and length when viewed from above (Naini, 2011)<sup>1</sup>. Human skulls can be subdivided into three basic categories based on the cephalic index:

- 1) Dolichocephalic (long head)
- 2) Mesocephalic (average head)
- 3) Brachycephalic (short-wide head)

According to the subject's estimated cephalic index of 154.4, the subject's overall anatomical head type is ultra-brachycephalic. This is an extremely short wide head. Brachycephalic skulls are long from side-to-side, and narrow from front to back.

It's important to note however that the cephalic index is difficult to measure via photographs and is inaccurate without a top-down perspective picture. The measurement provided here is at best, a rough guess.

## Facial Index



The facial index is the ratio between the height of the face and the width of the face when viewed from the front (Naini, 2011)<sup>1</sup>. Human face types can be subdivided into three basic categories based on the facial index:

- 1) Euryprosopic (broad face)
- 2) Mesoprosopic (average face)
- 3) Leptoprosopic (tall, narrow face)

According to the subject's estimated facial index of 92.1, the subject's overall anatomical face type is leptoprosopic. This is a tall and narrow face. Leptoprosopic faces are vertically wide and horizontally short when viewed from the front.

Mesoprosopic faces are considered the most attractive, likely because they are the most average (Verma & Chitra, 2019)<sup>2</sup>.

## Craniofacial Height to Width Ratio

The craniofacial height to width ratio compares the width of the face at the cheekbone level to the height of the entire skull, and it should be around 60%(Naini, 2011)<sup>1</sup>.

The subject's craniofacial height to facial width ratio was measured to be 70%.

## Physiognomical Height to Width Ratio

The physiognomical height to width ratio compares the bizygomatic width to the physiognomical height of the face (trichion to menton). Normally, this value is in the range of 70-75%(Naini, 2011)<sup>1</sup>

The subject's bizygomatic width to physiognomical face height ratio is 70%, which means the face shape is relatively normal.

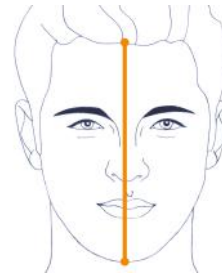
## Forehead Width

The forehead width is normally 80-85% of bizygomatic width(Naini, 2011)<sup>1</sup>. The subject's bitemporal to bizygomatic width ratio is 91%.

## Physiognomical Face Height

Physiognomical face height refers to the part of the face that goes from the hairline to the chin, or from tricheon to menton.

Physiognomical Facial Height
Value: 170.3 mm.
Normal Range: 160.1 - 198.1 mm. (Adelaja et al., 2016) <sup>3</sup>
Z-Score: -0.9

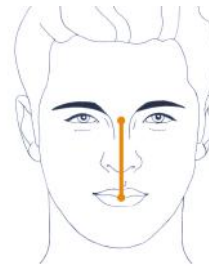


The estimated physiognomical face height is average.

## Upper Face Height

Upper face height refers to the part of the face that goes from the eye to the lip, or from nasion to stomion.

Upper Facial Height
Value: 57.3 mm.
Normal Range: 66.8 - 86 mm. (Ernest et al., 2018) <sup>4</sup>
Z-Score: -4



The estimated upper face height is below average.

## Lower Face Height

Lower face height refers to the part of the face that goes from under the nose to the bottom of the chin, or from subnasale to gnathion.

Lower Facial Height
Value: 59.4 mm.
Normal Range: 64.4 - 80 mm. (Wen et al., 2016) <sup>5</sup>
Z-Score: -3.3

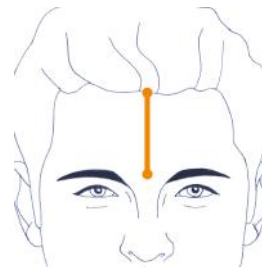


The estimated lower face height is below average.

## Forehead Height 1

Forehead height 1 measures the forehead from the trichion to glabella.

Forehead Height 1
Value: 57.3 mm.
Normal Range: 45.1 - 71.8 mm. (Wen et al., 2016) <sup>5</sup>
Z-Score: -0.2

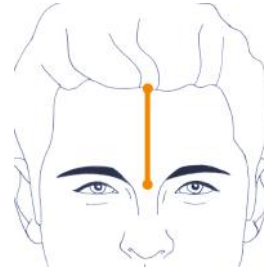


The estimated forehead height is average.

## Forehead Height 2

Forehead height 2 measures the forehead from the trichion to nasion.

<b>Forehead Height 2</b>
Value: 71 mm.
Normal Range: 56.1 - 69.3 mm. (Farkas et al., 2005) <sup>6</sup>
Z-Score: 2.5



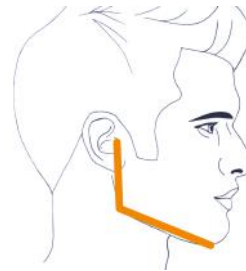
The estimated forehead height is above average.

# The Lower Third

The lower third of the face consists of the mandible (lower jaw) and part of the maxilla (upper jaw). Its appearance is largely dictated by the mandible, which has the biggest impact on the appearance of the facial profile and silhouette. This makes it one of the most important markers of facial aesthetics. Correcting a deficient chin or mandible is relatively easy and provides one of the largest improvements in appearance.

## Gonial Angle

Gonial Angle
Value: 115.4°
Normal Range: 114 - 138°(Bhatia & Leighton., 2010) <sup>7</sup>
Z-Score: -1.8



The gonial angle, also known as the angle of the jaw, is created by the mandible's ramus and mandibular body.

The subject has an acute gonial angle, which will be seen as more masculine but not necessarily appeal to the maximum number of people. A decreased gonial angle is associated with anterior mandibular growth rotation (a jaw that has tilted upwards too much). However, the gonial angle is difficult to visualize via a photograph has a high measurement error.

## Facial Angle

The facial angle is the angle created by the Frankfort horizontal plane and a line drawn from nasion to pogonion. It provides a rough estimate of the prominence of the chin, but cannot differentiate whether abnormalities stem from mandible size, mandible position, or size of the chin's soft tissues. The facial angle is generally between 90 and 92 degrees. Higher facial angles were common in models and Greek statues. Lower values are very common among modern humans. This measurement also has a high measurement error and individual variability in the Frankfort horizontal plane can also throw off the measurement.

The subject's facial angle is estimated at 88.8, which might indicate a retrusive chin. However, this is potentially normal, given the subject's African ethnicity.

## Facial Convexity Angle

The facial convexity angle describes how convex or concave the face appears from a side profile, and is another method of assessing the prominence of the lower third. It is the angle created by lines drawn from the glabella to subnasale, and subnasale to pogonion.

Facial Convexity Angle
Value: 170.8°
Normal Range: 161.9 - 175.3°(Wen et al., 2016) <sup>5</sup> , 158.3 - 178.1°(Fernández-Riveiro et al., 2003) <sup>8</sup>
Z-Score: 0.7

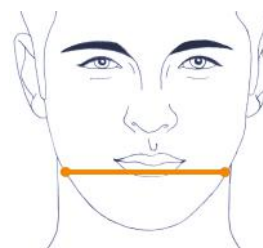


The estimated facial convexity angle indicates average jaw skeletal class and alignment. The chin is relatively in line with the midface and not of aesthetic concern.

## Bigonial Width

The bigonial width, also known as jaw width, is the size of the jaw from one gonion to the other, or, in other words, the width of the jaw from a frontal profile. Having a large bigonial width is what we normally think of as 'having a large jaw' and contributes to a masculine appearance.

Bigonial Width
Value: 117 mm.
Normal Range: 94.8 - 118.4 mm. (Viridi et al., 2019) <sup>9</sup>
Z-Score: 1.8



The estimated bigonial width is average.

## Bigonial Width to Bizygomatic Width Ratio

A more useful metric for jaw size is the ratio of the bigonial width to bizygomatic width, as this determines whether your jaw is in harmony with the rest of your face. The normal ratio is 70-75% (Naini, 2011)<sup>1</sup>.

However, according to Mommaerts (2016)<sup>10</sup>, a larger bigonial to bizygomatic width of about 95% (closer to 100%) is preferred in men as it creates a more masculine look and square face shape.

The subject's bigonial to bizygomatic width ratio is 87%, which is normal.

## Gonion Analysis

The gonion is where the body and ramus of the jaw meet, which creates the angle of the jaw. For an attractive jawline, the gonion needs to both be prominent and have the appropriate curvature. Prominence is determined by body fat composition and jaw size. Curvature depends largely on the gonial angle but also the strength of the masseter muscles.

The subject has a normal gonion curvature which is neither too obtuse or acute, but is the ideal gonion curvature for men (Mommaerts, 2016)<sup>10</sup>.

The subject's gonion is barely visible in the provided image and difficult to discern. Factors such as lighting, body fat and mandibular recession can all contribute to gonion prominence. Since the subject's gonion is barely visible in the provided photo, assessment of the gonion curvature is subject to a high degree of error. This is relatively common as the gonial angle is difficult to visualize on photographs unless under ideal lighting conditions.

## Chin Width

The width and prominence of the chin is a highly dimorphic trait. Men are expected to have large, wide chins whereas women are expected to have soft, small chins.

The subject has an average chin which should appear attractive to most people.

## Mandible Height

Mandible height measures the height of the lower jaw.

Mandible Height
Value: 38.9 mm.
Normal Range: 37.8 - 55.8 mm. (Ernest et al., 2018) <sup>4</sup>
Z-Score: -1.8



The estimated mandible height is average.

## Frankfort-Mandibular Plane Angle

The mandibular plane angle is the angle created by the mandible and the Frankfort horizontal plane. For an accurate assessment, hard tissue cephalometric measurements are ideal (x-rays). However, the mandibular plane angle can also be roughly estimated with soft tissue measurements, though good visualization of the gonion and orbitale are required.

The subject's estimated mandibular plane angle is 21.4°, which is normal.

## Mentocervical (Cervicomental) Angle

The mentocervical angle has been used to describe completely different parameters. Most commonly, and in this report, it refers to the angle created by the submental region and the facial plane. Excessive neck fat and a low-set hyoid will create a high mentocervical angle. In general, the lower this angle is, the better.

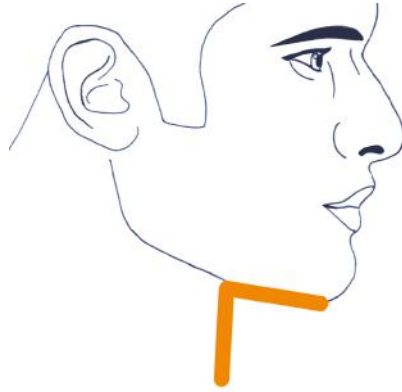
Mentocervical Angle
Value: 92.3°
Normal Range: 84.1 - 94.6° (Wen et al., 2016) <sup>5</sup>
Z-Score: 1.1



The estimated mentocervical angle is average.

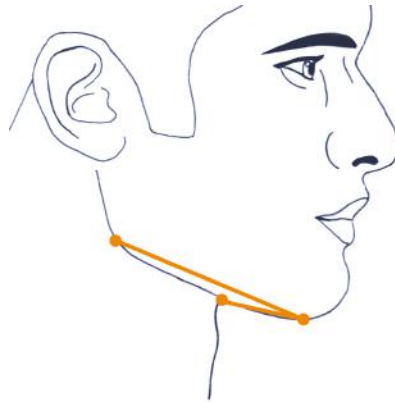
## Submental-Cervical Angle

The submental-cervical angle is the angle where the jawline meets the neck. It's a great indicator of how defined your jawline is, and also a good marker of forward growth of the jaw. However, this angle has a high degree of measurement error.



The subject's submental-cervical angle is  $116.1^\circ$ , which is normal and appears youthful according to Ellenbogen & Karlin (1980)<sup>11</sup>.

## Submental Jaw Angle



The amount of fat and tissue under the jaw determines how sharp the jaw appears. It is determined largely by forward growth of the jaw, good oral posture during development, and most importantly the amount of fat present in the submental region. The submental-jaw angle directly measures the submental region.

The subject's submental-jaw angle is  $22.4^\circ$ , which is relatively average, but could be improved by weight loss and proper oral posture.

# The Eye Area

The eye area is one of the most important and expressive parts of the face. Research shows that during interactions, people spend the most time looking at the eyes. The eyes are frequently hidden/blurred to anonymize photos and provide cues to general health.

## Undereye Hollowing

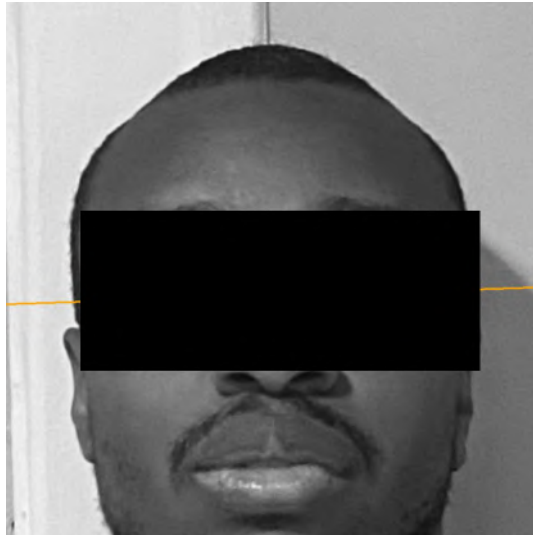
The maxilla and facial soft tissues support the eyes in the area called the tear trough. A lack of adequate eye support creates sunken eyes and a hollow look in the undereye region. However, if the hollowing has persisted since childhood then it is most likely genetic. But the subject has no obvious undereye hollowing.

## Lower Eyelid Margin Health

The subject appears to have healthy eyelids with no evidence of entropion or ectropion.

## Canthal Tilt

Canthal tilt is a sign of good facial development. As the maxilla and cheekbones push upwards on the orbits due to proper tongue posture and occlusal force, the lateral orbital rim rises as well, creating an alert cat-eye appearance. On the other hand, a negative canthal tilt appears tired and droopy. According to a study performed by Bashour & Geist (2007)<sup>12</sup>, 93% of people preferred faces with a positive canthal tilt. Though the study was performed on women, it can be extrapolated to men as well because it's a sign of overall good facial development. The vast majority of male models have a positive canthal tilt.



<b>Total Canthal Tilt</b>
Value: 2°
Normal Range: -2° - 6° (Farkas, 1994) <sup>13</sup>
Z-Score: 0

Right Canthal Tilt: +4.4°

Left Canthal Tilt: -0.3°

The subject has a positive canthal tilt of the right eye, which is considered conventionally attractive. The subject has a neutral canthal tilt of the left eye. However, the canthal tilt is overall positive and the discrepancy appears to be from the subject tilting their head and/or the misaligned photo.

## Eyebrow Ptosis

The subject doesn't appear to have ptotic (drooping) upper eyelids.

## Upper Eyelid Exposure

People with alert, attentive faces appear more attractive than people who look tired (Sundelin et al., 2017).<sup>14</sup> A huge contributor to the tired appearance is upper eyelid exposure, which creates a sleepy effect (Knoll et al., 2008).<sup>15</sup>

The pretarsal region is the area between the upper eyelid crease and lash line, which determines the amount of upper eyelid exposure. According to Vaca et al. (2019)<sup>16</sup>, the ideal amount of pretarsal show is around 3-6 mm.

The subject has 4.6 mm. of pre-tarsal show on the left and 4.4 mm. of pre-tarsal show on the right.

The subject doesn't have any significant degree of asymmetry between the upper eyelids. Also, his upper eyelid show is within the ideal 3-6 mm. range

## Medial/Lateral Eyebrow Droop

With normal aging, the medial and lateral aspects of the eyebrow tend to descend, contributing to a tired or angry look. The subject does not appear to have age-related drooping of the medial or lateral aspects of the eyebrows.

## Medial Canthus Angle

An attractive eye area has a medial canthus that points down instead of to the side. This is an indicator of deep-set eyes that are pushed back into the skull. A high medial canthus angle generally means that the eyes are more hooded and properly developed, though East Asians naturally have more hooded eyes and a larger medial canthus angle.

The subject's average medial canthus angle between both eyes is 75.3°.

The subject's medial canthus angle is greater than 35 degrees, which can be an indicator of an attractive eye area

## Scleral Show

An ideal eye area has a minimum amount of the sclera (white) showing. A lot of scleral show is a sign of lower eyelid retraction.

There is no evidence of scleral show based on the provided frontal photograph.

## Inter-canthal Width

Inter-canthal width measures the width between the medial eye canthi.

Inter-canthal Width
Value: 30.9 mm.
Normal Range: 28.3 - 43.1 mm. (Murphy et al., 1990) <sup>17</sup>
Z-Score: -1.3



The estimated inter-canthal width is average.



## Interpupillary Width

Interpupillary width measures the distance between the two pupils.

Interpupillary Width
Value: 60.8 mm.
Normal Range: 59.1 - 73.5 mm. (Murphy et al., 1990) <sup>17</sup>
Z-Score: -1.5



The estimated interpupillary width is average.

## Outercanthal Width

Outercanthal width measures the width between the lateral eye canthi.

Outercanthal Width
Value: 86.6 mm.
Normal Range: 91.2 - 105.2 mm. (Virdi et al., 2019) <sup>9</sup>
Z-Score: -3.3



The estimated outercanthal width is below average.

## Eye Fissure Width

Eye fissure width measures the width of the eye.

Eye Fissure Width
Value: 27.9 mm.
Normal Range: 27.2 - 40.8 mm. (Virdi et al., 2019) <sup>9</sup>
Z-Score: -1.8



The estimated eye fissure width is average.

## Eye Fissure Height

Eye fissure height measures the height of the eye.

Eye Fissure Height
Value: 7.3 mm.
Normal Range: 8.2 - 13 mm. (Eze et al., 2013) <sup>18</sup>
Z-Score: -2.8



The estimated eye fissure height is below average.

## Eyebrow Height

The brow ridge to IPD ratio is a great benchmark for determining how low or high set the eyebrows are and is calculated by dividing the IPD (interpupillary distance) with the distance from the eyebrow to pupil.

The subject has an IPD ratio of 2.4, which indicates high set eyebrows. High-set eyebrows are generally unattractive on men.

# The Midface and Cheekbones

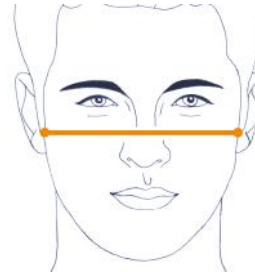
## Cheekbone Height

The subject appears to have average height cheekbones based on the provided frontal photograph. Most people have average height cheekbones.

## Face (Bizygomatic) Width

The width of the face, also known as bizygomatic width, measures the width of your face at your cheekbones at their widest point.

Width of the Face
Value: 134.4 mm.
Normal Range: 113 - 162.2 mm. (Wen et al., 2016) <sup>5</sup>
Z-Score: -0.3



The estimated face width is average. The subject also has visible cheek hollows, which is considered attractive.

## FWHR

FWHR is the facial width to height ratio. It essentially determines how wide the face is perceived. FWHR also carries with it several other assumptions that humans make about behavior, whether they are accurate or not.

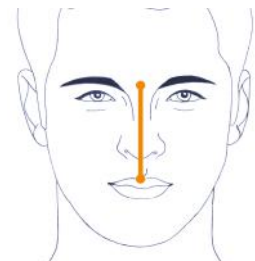
The FWHR is determined by dividing the facial width (bizygomatic width) by the facial height. The bizygomatic width is the distance between the right and left zygion. The facial height isn't measured consistently among researchers but most often it refers to the distance from the upper lip to the eyelids (nasion). The link between FWHR and attractiveness is not well established.

The subject has a facial width to height ratio of: 1.9, which is an average FWHR. The subject is within one standard deviation of the average FWHR (Kosinski, 2017)<sup>19</sup>.

## Midface Height

Midface height refers to the middle part of the face. It is measured from the glabella to the labrale superius.

Midface Height
Value: 69 mm.
Normal Range: 51.9 - 73.7 mm. (Wen et al., 2016) <sup>5</sup>
Z-Score: 1.1



The estimated midface height is average.

## Philtrum Length

The philtrum length is the distance from the top of the upper lip to the bottom of the nose. Its length plays an important role in how long your midface appears. Since the maxilla sinks with age, a long philtrum can contribute to the appearance of an old long-looking face, whereas a short philtrum is a youthful baby-faced feature.

Philtrum Length
Value: 11.3 mm.
Normal Range: 12.9 - 18.1 mm. (Virdi et al., 2019) <sup>9</sup>
Z-Score: -3.2



The estimated philtrum length is below average.

## **Cheek Hollows and Fullness**

After puberty, the baby cheek fat normally disappears to show any underlying cheek hollows. Hollow cheeks signify sexual maturity whereas full cheeks signify youth. Men are generally expected to fall into the former category but obvious cheek hollows aren't a requirement for an attractive midface.

The subject has full cheek hollows but not too full, which appears aesthetic and youthful.

# The Nose

## Nasal Index

The nasal index is simply the relationship between the width and height of the nose. It varies greatly between ethnicities. The subject's nasal index is 99.2, which is classified as platyrrhine. These types of noses are wide and flat.

## Columellar-Alar Relationship

The relationship between the columella and ala determines the aesthetics of the lower third of the nose. The columella-alar relationship can be divided into 6 different types (Gunter et al., 1996)<sup>20</sup>.

The amount of columellar show was measured at 0.5 mm, which is normal. In addition, the columellar-alar relationship appears normal based off a quick visual assessment.

## Nasofrontal Angle

The nasofrontal angle measures the angle created by the nose and brow ridge when viewed from a side profile.

Nasofrontal Angle
Value: 130.3°
Normal Range: 126.5 - 133.1° (Farkas, 1994) <sup>13</sup>
Z-Score: 0.3



The estimated nasofrontal angle is average.

According to Naini et al. (2016)<sup>21</sup>, a nasofrontal angle of 130 degrees is ideal. Though Naini et al. only researched Caucasian men, it can still be useful to compare the subject to eurocentric standards. The subject matches this very closely and essentially has an ideal nasofrontal angle.

## Nasal Tip Angle

The nasal tip angle is the angle created by the bridge of the nose and the columella. Essentially, it's measuring how pointy your nose is overall.

Nasal Tip Angle
Value: 67.4°
Normal Range: 70.6 - 87.3° (Wen et al., 2016) <sup>5</sup>
Z-Score: -2.8



The estimated nasal tip angle is below average.

## Nasolabial Angle

The nasolabial angle is the angle created by the philtrum and the columella.

Nasolabial Angle
Value: 64.5°
Normal Range: 76.6 - 98.5° (Wen et al., 2016) <sup>5</sup>
Z-Score: -4.2



The estimated nasolabial angle is below average. However, the nasolabial angle is also difficult to measure and has a high measurement error.

## Nasofacial Angle

The nasofacial angle is the angle of the nasal structure as it pertains to the perpendicular line of a person's facial plane.

Nasofacial Angle
Value: 39.2°
Normal Range: 36.8 - 41.4°(Wen et al., 2016) <sup>5</sup>
Z-Score: 0.1



The estimated nasofacial angle is average.

## Nasomental Angle

The nasomental angle is the angle created by the line from the nasion to the tip of the nose and the line from the tip of the nose to the chin.

Nasomental Angle
Value: 129.3°
Normal Range: 119.9 - 128.6°(Wen et al., 2016) <sup>5</sup>
Z-Score: 2.3



The estimated nasomental angle is above average.

## Labiomental Angle

The labiomental angle is the angle created by the lower lip and chin.

Labiomental Angle
Value: 131.4°
Normal Range: 122 - 138.5°(Wen et al., 2016) <sup>5</sup>
Z-Score: 0.3



The estimated labiomental angle is average.

## Total Facial Convexity Angle

Like the facial convexity angle, the total facial convexity angle also describes how convex the face appears from a side profile, but it incorporates the protrusion of the nose. It is the angle created by lines drawn from the glabella to pronasale, and pronasale to pogonion.

Total Facial Convexity Angle
Value: 146.5°
Normal Range: 139.6 - 150.3°(Wen et al., 2016) <sup>5</sup>
Z-Score: 0.6

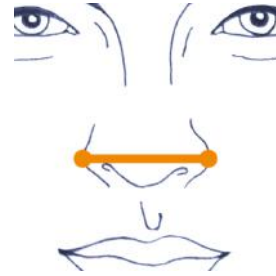


The estimated total facial convexity angle indicates normal jaw skeletal class and alignment.

## Nasal Width

Nasal width measures the width of the nose from the side of each ala from a frontal view.

Nasal Width
Value: 43.4 mm.
Normal Range: 35.6 - 43.2 mm. (Virdi et al., 2019) <sup>9</sup>
Z-Score: 2.1



The estimated nasal width is above average.

## Nose Height

Nose height measures the height of the nose. It is measured from the nasion to the subnasale.

Nose Height
Value: 43.8 mm.
Normal Range: 39 - 57.1 mm. (Wen et al., 2016) <sup>5</sup>
Z-Score: -0.9



The estimated nose height is average.

## Nasal Bridge Length

Nasal bridge length measures the height of the nose bridge. It is measured from the nasion to the pronasale.

Nasal Bridge Length
Value: 40.4 mm.
Normal Range: 22 - 42.4 mm. (Farkas, 1994) <sup>13</sup>
Z-Score: 1.6



The estimated nasal bridge length is average.

## Nasal Tip Protrusion

Nasal tip protrusion measures the nose's distance from the face and can be a good indicator of maxillary forward growth. It is measured from the subnasale to the pronasale.

Nasal Tip Protrusion
Value: 14.9 mm.
Normal Range: 7.7 - 20.7 mm. (Wen et al., 2016) <sup>5</sup>
Z-Score: 0.2



The estimated nasal tip protrusion is average.

## **Nasal Height to Projection Ratio**

A better indicator of nasal projection is the nasal height to projection ratio, which analyzes the harmony of the nasal projection vs. the nasal height from a side profile. This ratio is determined by dividing the length of a line from the nasion to subnasale and a line that is perpendicular which runs to the pronasale. Normally, the nasal height to projection ratio should be around 3. The lower the ratio, the more projected the nose is, and vice-versa.

The subject's nasal height to projection ratio is 3.2, which is normal.

## **Dorsum Evaluation**

An aesthetic nose has a nasal dorsum that is relatively straight. However, men usually have a dorsal hump.

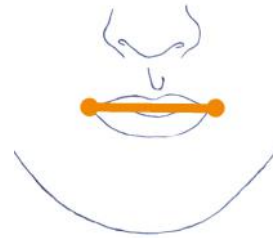
The subject has a straight dorsum, which is normal.

# The Mouth Area

## Mouth Width

Mouth width measures the width of the mouth from a frontal view.

Mouth Width
Value: 56 mm.
Normal Range: 49.3 - 62.9 mm. (Virdi et al., 2019) <sup>9</sup>
Z-Score: 0



The estimated mouth width is average.

## Upper Lip Height

Upper lip height in cephalometry measures not just the upper lip, but the upper lip and the philtrum. A large upper lip contributes to the appearance of a long midface.

Upper Lip Height
Value: 22.1 mm.
Normal Range: 22.9 - 28.1 mm. (Virdi et al., 2019) <sup>9</sup>
Z-Score: -2.6



The estimated upper lip height is below average. This can create an increased interlabial gap and incisor exposure at rest.

## Lower Lip Height

Lower lip height in cephalometry measures not just the lower lip, but the lower lip and the chin (measured to the sublabiale). A large lower lip height will look masculine, but a low lower lip height will create the appearance of a weak or small chin.

Lower Lip Height
Value: 18.2 mm.
Normal Range: 18.7 - 26.3 mm. (Virdi et al., 2019) <sup>9</sup>
Z-Score: -2.3



The estimated lower lip height is below average.

## Vermillion Upper Lip Height

Full, pouty lips are sexually attractive on both males and females, but it is an especially underrated feature in men. Hier et al. (1999)<sup>22</sup> have shown that women prefer full lips on men even more than men prefer full lips on women. Full lips can contribute to a 'macho' aesthetic for men.

Vermillion upper lip height measures the height of the upper lip from a frontal view.

Vermillion Upper Lip Height
Value: 13.2 mm.
Normal Range: 11.1 - 16.3 mm. (Virdi et al., 2019) <sup>9</sup>
Z-Score: -0.4



The estimated vermilion upper lip height is average.



## Vermillion Lower Lip Height

Vermillion lower lip height in cephalometry measures the height of the lower lip down to the sublabiale.

Vermillion Lower Lip Height
Value: 15.4 mm.
Normal Range: 12 - 15.6 mm. (Virdi et al., 2019) <sup>9</sup>
Z-Score: 1.8



The estimated vermillion lower lip height is average.

## Lip Line at Rest

The subject appears to have incomplete lip seal and open-mouth posture. However, this is common in certain African and Asian ethnicities. The decreased upper and lower lip heights prevents full coaptation of the lips. The decreased upper lip height prevents full coaptation of the lips. The large, flaccid lower lip tends to hang open much easier than if the lips were thin.

## Upper Lip Analysis

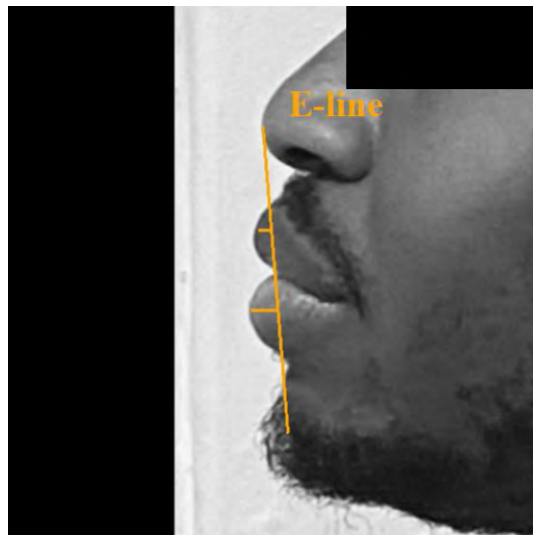
The upper lip sulcus depth is essentially how deep the curve is that's created by the upper lip and the base of the nose. The subject's upper lip sulcus is not visible, which is a normal finding but might also stem from genetically small lips, retrusion, or retroclination of the upper incisors and/or maxillary retrognathism. The upper lip curl appears normal.

## Lower Lip Analysis

The lower lip sulcus depth is essentially how deep the curve is that's created by the lower lip and the chin. The subject's lower lip sulcus depth is 4.7 mm, which is normal. The lower lip curl appears normal.

## Rickett's Esthetic Line

The esthetic plane created by Dr. Robert Ricketts analyzes the relationship between the lips, nose, and chin. It's an excellent tool for analyzing lip protrusion. A line is drawn from pronasale to pogonion and the protrusion of the lips is then compared. African ethnicities tend to have larger lips, bimaxillary dentoalveolar protrusion, as well as reduced chin and nose protrusion. As a result, the lips will be at or well in front of the esthetic line.



The upper lip is 2.6 mm. in front of the E-line.

The lower lip is 5.4 mm. in front of the E-line.

The subject's E-line doesn't show any obvious abnormalities.

## Subnasale/Pogonion Line

The subnasale/pogonion line also analyzes lip protrusion, but it takes the nose out of the equation by comparing the lips to a line drawn from the subnasale to the pogonion. As is the case with Rickett's esthetic line, African ethnicities tend to have larger lips, bimaxillary dentoalveolar protrusion, as well as reduced chin protrusion. As a result, the lips can be at an even further distance in front of the Sn/Pog line.



The subject's upper lip is 10.1 mm. from the Sn-Pog line.

The subject's lower lip is 9.9 mm. from the Sn-Pog line.

## Philtral Columns

The subject appears to have normal and prominent philtral columns, which appear attractive.

# Facial Harmony

Harmony is difficult to define. Most people agree that a harmonious face is one in which all the features relate well to each other. Therefore, we believe the best way to measure harmony is with ratios. This section will take a look at some overarching ratios of the face and determine how well they fit what humans subjectively consider to be 'harmonious'.

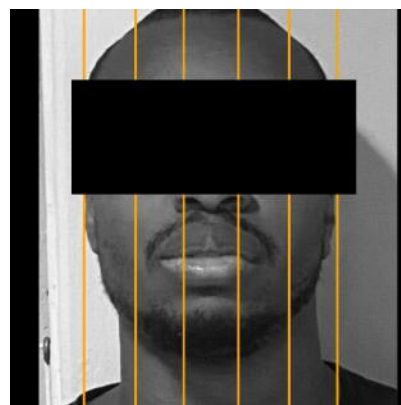
The artists of the Renaissance period developed aesthetic ideals known as neoclassical canons. Chief among them was the idea that the face could be divided into equal horizontal facial thirds and vertical facial fifths. These canons were used in art for centuries and are still used in textbooks and by plastic surgeons and orthodontists to inform treatment planning today. However, current anthropometric research shows that humans don't fit into these proportions perfectly. While these neoclassical canons represent an aesthetic ideal, they don't necessarily represent real or even attractive humans. Even elite models rarely fit these proportions.

## Facial Fifths

A harmonious face is generally considered to be divided into equal vertical facial fifths. Normal deviations in ear protrusion, combined with lens distortion, can throw off the lateral facial fifths. However, large deviations can still present an aesthetic concern.

This table shows the facial fifths starting from left to right. The ratio shows the measurement in relation to the smallest eye width fifth.

Measurement	Value	Ratio
Right Ear to Right Lateral Canthus	29.1 mm.	107
Right Lateral Canthus to Right Medial Canthus	27.1 mm.	100
Right Medial Canthus to Left Medial Canthus	30.8 mm.	114
Left Medial Canthus to Left Lateral Canthus	28.6 mm.	106
Left Lateral Canthus to Left Ear	27.1 mm.	100



## Facial Thirds

A harmonious face is also considered to be able to be divided into equal horizontal facial thirds. Small deviations can generally be ignored. The upper and lower facial thirds can also be difficult to measure correctly in photographs.

This table shows the facial thirds starting from top to bottom. The ratio shows the measurement in relation to the middle third.

Measurement	Value	Ratio
Upper Third (Tr to G)	46.9 mm.	74
Middle Third (G to Sn)	63.4 mm.	100
Lower Third (Sn to Me)	80.4 mm.	127



The subject's upper third appears too small for their midface. However, smaller foreheads don't present a serious aesthetic concern.

The subject's lower third appears too large for their midface. However, a larger lower third isn't a serious aesthetic concern for men.

Almost all attractive male celebrities and models have the lower third as their longest third. The lower third should be about 35-40% of the face. A value of 38% would fit the golden ratio.

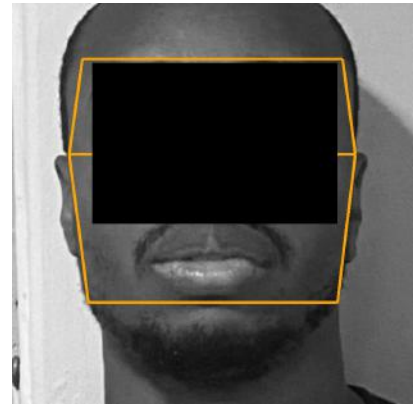
At 42.1%, the subject's lower third is far above the 35-40% range, implying excessive downward mandibular growth.

## Facial Taper

Facial taper determines the overall shape of the face from a front view. It is determined by analyzing the three main widths of the face: bitemporal (forehead) width, bizygomatic (cheek) width, and bigonial (jaw) width. Decisions on hairstyle, makeup, and grooming revolve around your face shape and facial taper. The normal ratios for facial taper are around 83/100/76. Ideal facial taper ratios are a topic of debate, and most likely vary with sex and individual facial features.

The table below shows the three facial measurements starting from the forehead. The ratio column shows the measurement in relation to the bizygomatic width.

Measurement	Value	Ratio
Bitemporal Width	122.3 mm.	91
Bizygomatic Width	134.4 mm.	100
Bigonial Width	117 mm.	87



## Mouth to Nose Ratio

The mouth-to-nose ratio is useful for determining if the nose is too big for the mouth or vice versa. A good mouth-to-nose ratio is 1.4-1.6. Sometimes, the mouth-to-nose ratio can match the golden ratio in certain people (1.61), but this is uncommon even in models and represents a relatively high ratio. Men should not be expected to hit this golden ratio because of their wider and more masculine noses. Smiling brings the mouth and nose more in line with the golden ratio.

The subject's mouth-to-nose ratio is 1.3, which is normal.

## Chin to Philtrum Ratio

The chin to philtrum ratio is a good benchmark for how big the chin looks. If this ratio is too big, the chin looks oversized, and if it's too small the chin looks small and weak.

The subject has a high chin to philtrum ratio of 3.44, which creates the appearance of an overly large chin. It creates a masculine look but is not aesthetic.

## Nose to Philtrum Ratio

The nose to philtrum ratio measures the height of the nose by the height of the philtrum. It helps determine how elongated your philtrum and face looks. If this ratio is too high or low, the face appears longer due to either the nose or philtrum. A ratio of around 2.5 is just right but is normally slightly smaller in men.

The subject's nose to philtrum ratio is 3.87, which is normal.

## Midface Ratio

The midface ratio is a better way of analyzing the midface than just looking at the length of the middle third. The midface ratio incorporates the philtrum which, if too long, also contributes to the appearance of a long midface. The midface ratio is determined by taking the interpupillary distance and dividing it by the midface from the nasion to the labrale superius. The ideal midface ratio is around 1.0 to 1.1.

The subject's midface ratio is 1.17, which is high. The midface is too short and can create an uncanny look.

## Upper Lip to Lower Lip Ratio

The upper lip to lower lip percentage is normally around 30% vs. 70%. However, larger values are sometimes acceptable and create a macho lip effect.

The subject's upper lip to lower lip ratio is 49.5% vs. 50.5%.

The subject's upper lip appears larger than normal.

## Medial Limbal Width vs. Mouth Width

The width of the mouth and the medial limbal width should be roughly the same. The medial limbal width is the distance between the sides of the iris that are closest to the nose.

The mouth width is 56 mm, and the medial limbal width is 49.8 mm.



### Leonardo's Commissure-Limbus-Eyebrow Peak Line

To determine the ideal location of the peak of the eyebrow arch, a line is drawn from the oral commissure to the peak of the eyebrow. This line should also intersect the lateral limbus. This is a difficult standard to match as the interpupillary width, maxilla height, and mouth width can all easily throw this off. Usually, people might match this line on one side, but not both. In this report, we will determine the angle between the subject's commissure-eyebrow peak line, and the commissure-eyebrow peak line if it was in line with the lateral limbus. An angle of  $0^\circ$  is perfect.

The deviation from the ideal commissure-limbus-eyebrow peak on the right is  $5.4^\circ$ , and on the left is  $4.1^\circ$ . The subject does not match Leonardo's commissure-limbus-eyebrow peak line on the right side but closely matches Leonardo's commissure-limbus-eyebrow peak line on the left side. The subject's right and left eyebrow peaks also start between the lateral limbus and left exocanthus, which is considered attractive.



## Mouth Width vs. Bigonial Width

The normal ratio for the mouth width vs. the bigonial width is around 55%.

The subject's mouth to bigonial width ratio is 47.9%, which appears relatively normal.

## Mouth Width vs. Lower Face Height

The mouth should be around 40% of the lower face height (glabella to menton). The subject's mouth width vs. lower face height ratio is 38.9%, which is relatively harmonious.

## LAFH/TAFH Ratio

The lower anterior facial height vs. total anterior facial height ratio is a good indicator of lower facial proportions. A value of around 55% is ideal, with a lower ratio being preferable to a higher ratio (Johnston et al., 2005)<sup>23</sup>.

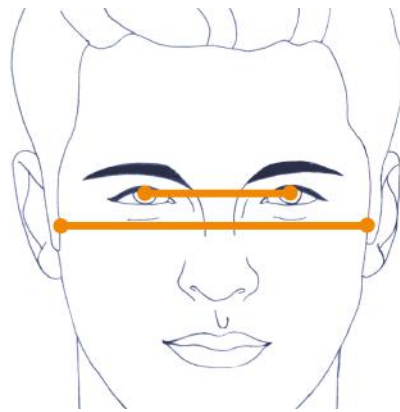
The subject's LAFH/TAFH ratio is 51.2%. This is within two standard deviations of the normal population. The subject's LAFH/TAFH ratio is essentially ideal.

## Outercanthal Width vs. Head Width

A normal outercanthal width vs. head width ratio should be around 60%. The subject's ratio is 62.4%. This ratio is normal in the subject.

## ES Ratio

The eye separation ratio (ES ratio) is used to determine how close or far-set the eyes are. The traditional rule of fifths (eyeball's width) cannot be used as a benchmark because it can be thrown off by the facial width. The ES ratio takes the facial width into account. A normal ratio is around 0.45 - 0.47, but can be slightly higher in men.



The subject's ES ratio is 0.453, which is optimal and creates the appearance of ideal eye spacing.

## Outercanthal Width vs. Bizygomatic Width

This ratio is similar to the ES ratio except that the outercanthal width takes the overall width of the eyes into account.

The subject has an outercanthal vs. bizygomatic width ratio of 0.644, which is ideal.

## Intercanthal Width vs. Bizygomatic Width

A normal intercanthal width vs. bizygomatic width should be around 25%. The subject's ratio is 23%. This is relatively low and implies either a small intercanthal width or large bizygomatic width.

## Interpupillary Distance vs. Outercanthal Width

A normal interpupillary distance vs. outercanthal width should be around 70%. The subject's ratio is 70.3%. This ratio is normal in the subject.

# The Ears

Ear aesthetics are not as important for facial attractiveness. Nonetheless, serious ear cosmetic issues can still impact harmony.

## Width and Height Dimensions

The average ear height is around 65 mm (55-75). The subject's ear height is 48 mm.

The average ear width is around 35 mm (30-45). The subject's ear width is 30 mm.

## Width to Height Ratio

The normal width to height ratio of the ear is 0.50–0.65 to 1. The subject's ear width to height ratio is 0.63, which is normal.

## Frontal Ear Protrusion

Perhaps the most significant aspect of ear aesthetics, is how far the ear protrudes from the head when viewed from the front. Normally, the auricocephalic angle determines the degree of ear protrusion, but it requires a top-down view of the subject with no hair in the way. Instead, we will directly measure the distance from the head from a frontal photograph. However, lens distortion is notorious for altering the visibility of the ears and is a significant factor in the accuracy of this measurement.

The subject's ears protrude 4.2 mm. from the head. The ears appear to be pinned back much more than normal based on the provided frontal photograph.

## Relative Harmony

The ear should be about 1 ear length's distance from the lateral eyebrow. The subject's ear length is 48.2 mm, and the subject's distance from the ear to the lateral brow is 64.8 mm.

The subject's ear height and distance from the ear to lateral brow are relatively harmonious.

The ear height should also match the height of the middle third of the face, from the nasion to the subnasale. The subject's middle third height is 63.4 mm.

The subject's ear height and distance from the ear to lateral brow are relatively harmonious.

# Skin and Soft Tissues

The soft tissues sit on top of your bone structure and ultimately determine whether your bone structure has made you attractive or not. Optimizing fat and skin should take priority before more invasive procedures.

## Contrast

Contrast and coloring is an underrated aspect of facial aesthetics. In the ideal face, the hair and eyebrows should be on the darker side, while the teeth and eyeballs should be white. The subject has ideal coloring for his ethnicity, though the eyebrows could be darker which would help frame the face.

## Hair

Hair is very important for men. Decreased cranial hair is associated with increased perceptions of social maturity, but decreased perceptions of attractiveness, aggressiveness, and youthfulness (Muscarella & Cunningham, 1996).<sup>24</sup> Men with a Norwood 6 hairline recession are rated half as attractive than if they had a full head of hair (Kranz et al., 2019).<sup>25</sup>

The subject's hairline is a 3 on the Norwood scale. The classic M-shape of male pattern baldness is beginning to appear, and most men begin to seek treatment at this point if hair loss runs in the family.

## Facial Adiposity (Fat)

According to Coetzee et al. (2009)<sup>26</sup>, facial adiposity is a cue to health and closely correlates with attractiveness. In addition, people with intermediate facial fat are judged more favorably than people with higher facial fat or people whose facial fat is far too low. Overall, optimizing body fat percentage is one of the easiest ways to improve facial aesthetics. Attractive features can be easily hidden by facial fat. Men should avoid excessive facial fat since it is a feminine feature. Low body fat with sharp contours and edges are perceived as masculine, whereas high levels of body fat are perceived as unattractive and/or unhealthy. The ideal range will differ for the individual, but men should aim for a body fat percentage around 10-14% for optimal facial aesthetics.

Upon visual inspection, the subject appears to be in an ideal or nearly ideal range for facial adiposity.

## Skin Quality & Sun Damage

Flawless skin is one of the most sought-after beauty traits. Beautiful skin signals youth and health, which is perceived as attractive. Preventing photoaging is extremely important for the integrity of the soft tissues and the maintenance of youthful, attractive skin. Based off the provided photograph, the subject's skin appears youthful and attractive. The skin color distribution is relatively homogenous and there are no obvious blemishes. There are no visible signs of photoaging. However, the effects of UV exposure are cumulative and will surface later in life. Sunscreen should be used every day to prevent continuing UV damage.

## Nasolabial Folds

The subject has no visible nasolabial folds based on the provided photograph.

## Jowling

Jowling is when the lower part of the cheek sags with age. The subject doesn't appear to have any obvious jowling based on the provided photograph.

## Midface Contour

The subject does not have any obvious tear trough hollows and midface contour defects, which is perceived as youthful.

## Wrinkle Assessment

Wrinkles usually occur by the age of 40 but it's also common for them to occur in the 20s or 30s. They can detract from a youthful appearance, but having some degree of wrinkles is normal. Eliminating wrinkles entirely when they're normal would lead to an uncanny and unnatural appearance. Eliminating wrinkles in the 20s and 30s is relatively safe, however.

The subject has no obvious marionette lines, forehead rhytids, or crow's feet based on the provided images.

## Neck Size

Neck size is a vital indicator of strength and masculinity. It's essentially a cue to lower body strength.

The subject appears to have a normal neck size based on visual inspection. A neck as wide as the jaw, or close to it, is usually ideal.



# Smile Analysis

There are essentially two types of smiles: posed (or social) and natural (or spontaneous). In this report, the posed smile will be analyzed. The posed smile has the most relevance as it is easily reproducible, consistent, and sees the most use in photographs and social media.

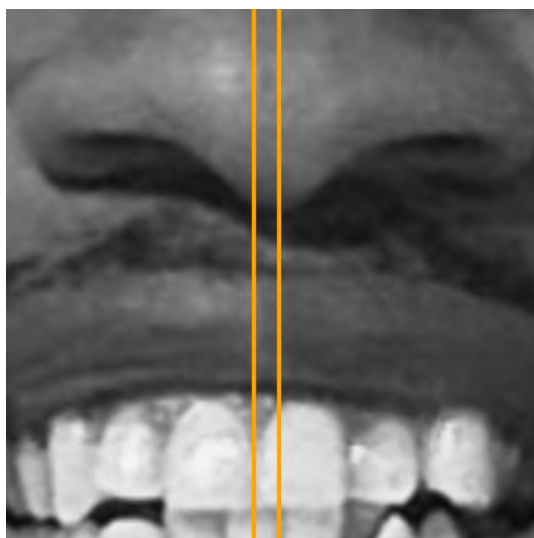
## Smile Symmetry

A hallmark of an attractive smile is overall symmetry. The left upper lip appears to be slightly hypomobile and reveals less of the gum line. The smile symmetry is negatively impacted by the crowding of the teeth.

## Canting and Midline Deviation



In a normal symmetrical jaw, with the jaw closed, the upper and lower teeth should form a plane that's parallel to a line drawn from pupil to pupil. The facial midline and the dental midline should be parallel, which it is in the subject. The occlusal plane appears normal based on the provided photo.



The dental and facial midline differs by approximately 2.3 mm. according to our measurements. However, this level of midline deviation is minor and unnoticed by both dentists and the general population (Kokich et al., 1999)<sup>27</sup>.



There appears to be a discrepancy between the upper and lower sets of teeth, whose midlines don't match.

### **Morley Ratio and Gingival Display**

Arguably one of the most important aspects of a smile is the level of the lip line and how much of the central maxillary incisors (two front upper teeth) are shown during a smile. A smile that shows too much of the gums is termed a gummy smile and looks unattractive, whereas a smile that doesn't show enough of the central incisors is a sign of aging and appears unattractive. The Morley ratio determines what percent of the central incisors are shown during a smile (Morley & Eubank, 2001)<sup>28</sup>. However, it's important to note that the posed smile reveals less of the gumline than the natural smile.

The smile appears very youthful since the central incisors are fully visible, which also means the Morley ratio isn't applicable.

The subject has a high smile, meaning that the lip line exposes the gingiva.

The subject has 1.8 mm. of gingival display.

This is an acceptable level of gingival display. While some gingival display is considered youthful, men generally want to avoid having excessive gum show because it is a feminine feature. Female lip lines are on average 1.5 mm. higher than male lip lines (Tjan et al., 1984)<sup>29</sup>.

## Smile Arc



Smiles are divided into three types based on the arc of the occlusal line: straight, consonant and nonconsonant. Consonant smile arcs are considered normal and the most attractive. The above image shows the natural upwards curve of a consonant smile arc. Based on visual inspection, the subject has a straight smile arc.

This type of smile arc requires an in-person consultation with an orthodontist to determine the cause and treatment options. A non-aesthetic smile arc can often be fixed with braces and dental intrusion/extrusion, but sometimes surgery might be required to correct underlying skeletal issues.

## Buccal Corridors and Smile Fullness

A hallmark of an attractive smile is a large palatal width with a full smile that exposes as many teeth as possible. However, a narrow palate, caused by improper oral development, contributes to a non-aesthetic and 'narrow' smile which hides more of the back teeth. Such smiles have large buccal corridors - the spaces between the teeth and the corners of the mouth that appear as a gap on a smile. However, smiles that are too full where the buccal corridors are completely obliterated are not ideal either as they lack warmth and appear less genuine (Helwig et al., 2017)<sup>30</sup>.

Smile fullness is essentially how much of your smile is made up by your teeth. People judge full smiles to be more attractive than less full smiles (Moore et al., 2005)<sup>31</sup>.

Moore's research also showed that while both men and women judge attractiveness by smile fullness, women are slightly more sensitive to judging smile fullness because they could tell the difference between broad and medium-broad smiles, whereas men couldn't. A wide smile can be assumed to be more important to women than it is to men.

The subject's smile fullness percentage as given by Moore et al (2005) is 90.1%.

The subject's buccal corridor width percentage as given by Moore et al (2005) is 9.9%.

The subject appears to have a medium/broad smile and palate based on the provided frontal smiling photograph. The subject appears to have an attractive smile.

Upon visual inspection, the fifth tooth is visible. For optimal smile aesthetics, you should be able to see the fifth tooth (second premolar) given optimal lighting.

## Smile Index

The smile index is the ratio between the width and height of the smile. It's determined by measuring the intercommisural width and interlabial gap. Research done by Janu et al. (2020)<sup>32</sup> shows that the smile index decreases as the smile attractiveness increases. Attractive smiles had a modified smile index of  $42.15 \pm 4.71$ .

The subject's modified smile index as described by Janu et al. is 28.5.

The subject's smile index isn't ideal but still looks normal.

## Teeth Analysis

The average maxillary central incisor height is 10.6 mm. for males (Gillen et al., 1994)<sup>33</sup>. The subject's central incisor tooth height is 10 mm.

The ideal width should be 80% of the height, but normal can be anywhere from 66 to 80% (Gillen et al., 1994)<sup>33</sup>. The subject's incisor width is 77.9% of the incisor height.

## Gingival Components

An underrated component of a healthy smile is healthy-looking gums and an even gum line, which is an indicator of health. Based on visual inspection of the provided photo, the gum line appears slightly uneven due to the dental crowding, but the gums themselves appear normal and healthy, though an in-person visit to a dentist or orthodontist is required for an accurate diagnosis.

## Malocclusion Assessment

There appears to be at least Class 1 malocclusion (dental crowding) with bimaxillary protrusion. For optimal smile aesthetics, braces can help straighten the teeth and create a more consonant (upward curved) smile arc. The sixth tooth is visible when smiling, but the subject still has obvious buccal corridors (gaps by the cheeks when smiling), so an in person visit to an orthodontist is needed to confirm whether the palatal width is normal.

# Forward Growth Suite

Forward growth is an important component of attractiveness. A face that is forward-grown functions well and tends to be aesthetically pleasing. Forward growth isn't a guarantee of attractiveness, but it's still highly correlated. A person with a fully forward-grown face has reached their genetic potential.

Forward growth has two components: the forward growth of the maxilla (upper jaw) and mandible (lower jaw). In normal growth, the maxilla and the mandible will follow each other and grow together, but in some circumstances, one jaw can be behind or ahead of the other e.g. class 2 or 3 malocclusion.

Forward growth is best assessed on a lateral cephalogram (x-ray). With photogrammetric analysis, it's a bit more difficult because the soft tissues vary in size by individual and tend to obscure the underlying skeletal structure. In addition lens distortion and inability to replicate camera and head position can skew results. As a result, we will look at multiple measurements to most accurately assess forward-growth of both jaws separately.

This section will include forward growth scores for both jaws which work as a simple percentile. A score of 100 implies optimal forward growth, whereas a score of zero implies severe recession. Keep in mind that because of differing photo angles and possible lens distortion, the following measurements will not have ideal reproducibility.

## Maxillary Point Assessment

The nasal base contour can help determine the anteroposterior (forward) position of the maxilla and mandible. The cheekbone contour line starts by the zygion, comes across the cheeks, and ends at the nasal base at the maxillary point. The contour of the maxillary point can be a direct indicator of maxillary retrusion.

Upon visual assessment, the subject appears to have a normal maxillary point, which is consistent with maxillary forward growth.

## Exocanthion-Subnasale-Tragus Angle

This angle directly measures the degree of maxillary forward growth. A smaller angle implies less vertical growth and a more projected maxilla. The average angle is 39°.

The exocanthion-subnasale-tragus angle is 40.2°, which indicates a normal amount of forward growth.

The subject's maxillary forward growth score for the exocanthion-subnasale-tragus angle is 82.

## Nasolabial Angle

With mandibular recession, the lips will lose their support and the nasolabial angle will increase.

The subject appears to have a relatively normal nasolabial angle.

The subject's mandibular forward growth score for the nasolabial angle is 100.

## Esthetic Line

Rickett's esthetic line shows the relationship between the nose, mouth, and jaw. See the mouth area section of this report for the full E-plane measurement. In a recessed mandible, the bottom lip will be way in front of the esthetic line drawn from pronasale to pogonion. However, there is a degree of error because the size of the nose affects the results.

The subject's lower lip is in front of the Rickett's esthetic line, which could indicate mandibular recession. However, this is very common for African ethnicities and could potentially be normal for the subject's demographic.

The subject's mandibular forward growth score for the esthetic line is 40.

## Labiomental Angle

The labiomental (aka. mentolabial) angle is the angle from labrale inferius, to sublabial, to pogonion. With mandibular recession, the mentolabial angle will increase because the lower teeth are not pushing on the bottom lip and the mandible has grown downwards. However, there is a degree of error due to individual variability in chin tissue padding and lip size.

The subject appears to have a relatively normal mentolabial angle.

The subject's mandibular forward growth score for the labiomental angle is 32.

## Gonial Angle

With mandibular recession, the mandible will straighten out, which decreases the angle of the jaw (gonial angle).

The subject appears to have a relatively normal gonial angle. However, the gonial angle was difficult to visualize in the provided photographs.

The subject's mandibular forward growth score for the gonial angle is 94.

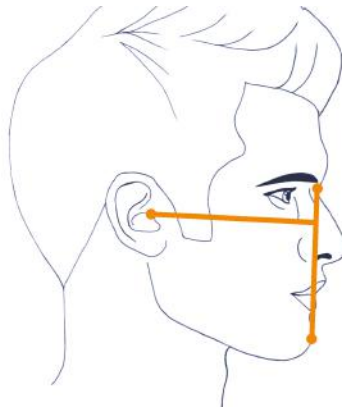
## Facial Convexity Angle

The facial convexity angle is useful for determining the relationship of both jaws' forward growth relative to each other. With mandibular recession, the mandible will fall behind the maxilla and the angle of the face from a side profile will decrease as the face shape becomes more convex. With maxillary recession, the angle of the face will increase as the maxilla moves backward. The ideal angle is around 175°. However, the limitation of the facial convexity angle is that it can appear normal if both jaws are recessed.

The subject's facial convexity angle indicates a normal maxillary to mandibular relationship.

## Facial Depth to Height Ratio

The facial depth to height ratio attempts to measure how wide the face is in relation to its height. A forward-grown face is wider when viewed from a side profile as well as vertically compact. This ratio attempts to measure the forward growth of the maxilla by drawing a line from nasion to pogonion and comparing it to a perpendicular line drawn to the tragon. An ideal facial depth to height ratio is 1.06-1.07. However, the limitation is that a forward-grown face with a genetically longer midface or lower jaw will throw the ratio off. On top of that, the facial depth normally has a high measurement error.



The subject's facial depth to height ratio is 0.75, which indicates possible maxillary recession.

The subject's maxillary forward growth score for the facial depth to height ratio is 1.

## Submental Distance

An indirect marker for a forward-grown mandible is the presence of ample space under the jaw (submental region), which directly measures the distance from the chin to the neck. An ideal measurement is around 40-75 mm (Naini et al., 2020)<sup>34</sup>. The higher the submental distance, the higher the perceived forward growth. However, this measurement has several limitations due to variations in neck fat and hyoid muscle tone, which can significantly throw the measurement off. Therefore, this isn't a true direct measurement of forward growth. Luckily, these issues can be fixed without surgery, which can contribute to a greater perceived forward growth of the mandible.

The subject's submental distance is 47.8, which indicates average (attractive) forward growth.

The subject's mandibular forward growth score for the submental distance is 46.

## Facial Depth to Midface Height Ratio

The facial depth to midface height ratio is similar to the facial depth to height ratio, except this time we compare the depth of the face to the midface height instead of facial height. Forward grown faces tend to have shorter midfaces due to proper tongue posture preventing the development of vertical maxillary excess, making this measurement more accurate in theory. As before, the main limitation of this measurement is that having both forward growth and a genetically longer midface will throw the ratio off, as well as having a high measurement error.

The facial depth to midface height ratio is 1.73, which indicates average forward growth of the maxilla.

The maxillary forward growth score for the facial depth to midface height ratio is 61

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## **Total Forward Growth Score**

The total maxillary forward growth score is 65.

The total mandibular forward growth score is 70.

The total forward growth score is 68.

The subject overall has good facial forward growth.

# Noninvasive Advice

## Haircut

The subject has a square/rectangle face shape.

The subject's bizygomatic width to physiognomical face height ratio is 70%. This is relatively normal and would allow for a more diverse range of hairstyles.

The best hair complements features, coloring, and mitigates flaws. Men have less room for error when it comes to unattractive face shapes because styling options for men are somewhat limited. For men, the goal is to create a more square face shape, which the subject already has. So essentially, the goal with hair styling is to not mess up the existing face shape.

Since the subject has a more feminine face, he should opt for a prettyboy-aesthetic.

Another possible haircut that would make the face appear more masculine would be long dreads with extra volume by the sides, which would increase the perceived width of the face and also cover the subject's larger bitemporal width. However, we suggest sticking with the existing haircut and/or shaving the head.

## Facial Hair

Studies have consistently shown that light stubble is the most attractive facial hair length on men (Dixson et al., 2016)<sup>57</sup>. Light stubble normally equates to 4-5 mm. but should also be adjusted for how dark and dense the hair is. The ideal light stubble is noticed from relatively far away but is still as short as possible without distracting from or hiding the subject's jaw structure.

The subject has a relatively large and wide lower third so a beard isn't necessary. The current beard has too much hair on the chin, which pushes the chin back in space and makes it appear smaller and more feminine looking, albeit at the bonus of making the face appear shorter and more square. However, the mustache helps decrease the perceived size of the philtrum which makes the chin look bigger and creates a more dominant look.

We suggest either going shorter on the beard (light stubble) or trying minoxidil and/or beard transplant to create full beard coverage. If a genioplasty is performed, facial hair won't be necessary at all.

## Oral Posture

The subject doesn't appear to have competent lips, which is consistent with open mouth posture. We recommend everyone adopt proper oral posture to ensure that facial bones remodel correctly in the upcoming decades of life. This consists of placing the tongue firmly on the roof of the mouth with as much surface area as possible, whilst avoiding touching any teeth. See [magnumworkshop.com](https://magnumworkshop.com) for a more detailed guide.

## Skincare Recommendations

Yearly fraxel laser and a retinol regimen would help smooth out the skin. Sunscreen should also be worn to prevent further photoaging.

# Invasive Advice

Our hierarchy of facial aesthetics consists of the following:

1. Harmony
2. Youthfulness & Dimorphism
3. Forward Growth
4. Averageness
5. Symmetry

The key to maximizing your potential is to maximize all these qualities as much as possible. As the jaw and eyes are the most important parts of the face, the most bang for your buck will consist of focusing on these areas. Keep in mind that while this report provides a starting point for any possible cosmetic intervention, an artistic eye is still necessary to determine whether any procedure will actually benefit your facial aesthetics.

**It's important to note that we are not suggesting that the subject should get these procedures, that they would be worth it, or that the subject is even a candidate for these procedures. Rather, this is simply a theoretical list of the best procedures in existence that would positively impact the subject's individual facial aesthetics. The following is not medical advice and requires an in-person consultation from a medical professional.**

## Surgery Basics

First it's necessary to realize that surgery will always come with risks, from the simplest filler injection to double jaw surgery. Plastic surgeons require hospital privileges in case you need to be transferred due to a medical emergency during your surgery. Apart from that, a huge risk often neglected is that of scarring. While a good surgeon and after-care will minimize scarring, realize that a scar gets created every time a knife opens skin, which is especially a problem for darker-skinned ethnicities. Only certain surgeries can work around scarring by creating the scar from an area it can't be seen e.g. behind the eyelid, inside the cheek, or behind hair. In some people, cutting the skin also traumatizes and kills hair follicles.

Surgery should not be taken lightly and all other alternative options should be exhausted first. Deciding whether the risks and cost are worth the aesthetic benefit requires lots of introspection and should be made with a clear head. Eliminating body dysmorphia from your decision is paramount. If a measurement or feature is normal in this report but the need to fix the perceived flaw still exists, body dysmorphia is likely the culprit and therapy should be sought out instead. Even if body dysmorphia is not a factor, realize that it's still entirely plausible that getting the desired surgery won't drastically change your life or even your overall aesthetics. It's not uncommon for people to undergo plastic surgery and come back to work with co-workers being none the wiser.

Researching the surgery and the provider is the biggest priority when considering surgery. First, you should recognize the difference between a cosmetic surgeon and a plastic surgeon. Keep in mind that there is no official cosmetic surgery board. A doctor can take a weekend class and call himself a 'cosmetic surgeon'. Cosmetic surgeons can be anything from a dermatologist to a family doctor. Unlike plastic surgeons, cosmetic surgeons are not guaranteed to be certified in plastic surgery, reconstructive surgery, or cosmetic surgery. Other vague marketing terms create more confusion e.g. dentists can call themselves 'cosmetic doctors'. This presents problems because doctors that are trained in the fewest procedures will always try to sell you on that procedure even though it's not best for you. Stay away from medical spas and if you're looking for dermal filler injections, you should at the least find a nurse injector.

If you're new to selecting a plastic surgeon we recommend you choose only a board-certified plastic surgeon from the American Board of Plastic Surgery (ABPS). You may still pick a cosmetic surgeon if you know what you're doing and the surgeon's results, reviews and experience are exceptional. When in doubt, visit the American Society of Plastic Surgeons website ([plasticsurgery.org](https://www.plasticsurgery.org)) to help you select a surgeon and make sure they're board certified with ABPS ([abplasticsurgery.org](https://www.abplasticsurgery.org)).

Look for reviews of surgeons on multiple websites and sort by the most negative reviews. You have to use your judgment to discern whether the negative reviews are superficial and irrelevant or highlight serious quality concerns. Watch out for low-priced surgeries. A surgeon that skimps on price could also be skimping on experience, anesthesiology, or having assistants do more of the work than they should. Realize that celebrity surgeons are not always the most skilled. A better marker of skill is whether the doctor participates in research rather than if they post on social media. Go to the surgeon's actual website and look at their body of work, asking whether they have an artistic eye and whether or not the worst result is one you would be fine with. Some red flags to watch out for during your consultation are a lack of before/after photos, a rushed consultation, a lack of explanation of the risks, and a lack of questions about what kind of results you expect. Ultimately, trust your gut.

## Augmentation Options

Plastic surgery has several ways of augmenting your existing bone structure and adding volume e.g. fillers, fat grafting, implants, and distraction. This essentially forms the basis of improving your facial structure and so it's essential to put some thought into each option and its risks, benefits and costs.

When attempting any kind of medical intervention it's always best to start with the least invasive option first to minimize potential complications, and then go from there. For plastic surgery, this is dermal fillers, which are injected into the desired spot and last for around 6 months. They don't require going under anesthesia, they're made of a material easily recognized and absorbed by the body, they can be dissolved and reversed as soon as they're injected, and they're very easy to shape. Very little can go wrong with fillers, but they do have downsides. For one, they can migrate to other parts of the face, especially when injected around very active muscles. Two, they don't completely dissolve and can last in unwanted parts of the face for years. Finally, while they look great after injection, they don't always hold their shape well, especially since they dissolve naturally. Fillers can also have serious side effects such as blocked arteries, infection, and blindness. The risk increases when performed by an



inexperienced or untrained practitioner.

Fat transfer seem like an ideal augmentation option at first; it uses the body's own natural fat, which develops a blood supply and lasts much longer than fillers. The problem is that fat is difficult to shape properly because a large portion of it gets absorbed. Multiple sessions will be required. On top of that, the transplanted fat often comes from the belly, which means that when you gain weight, the transplanted fat will grow at a much faster rate than surrounding fat. Fat transfer carries all the same risks as fillers, but it can't be reversed easily and it might also create bumps, cysts, and asymmetries. However, when fat transfer works and is done correctly, you're pretty much in the clear.

Implants have several advantages over other augmentation techniques, namely that they can last a lifetime and won't smush like fat or fillers will. However, the biggest misconception about implants is that they're permanent. It's impossible for implants to be permanent because the face and skull aren't static and change during the process of aging. Natural loss of volume might make the implant visible where it was once hidden. Implants may last forever, but implant removal surgery is common, and the tissue there won't be the same as before the implant was put in. If considering implants, be sure the surgeon will screw the implant into the bone, which eliminates any possible movement of the implant.

Distraction is the ideal augmentation method, as it quickly grows new bone that is 100% natural. A bone is broken and a distractor is placed that slowly moves the bone apart, letting new bone grow in. The downside is it is the most invasive, requires full surgery with anesthesia, can be painful and is only applicable for a few surgeries where the scar can be created in a place where it won't be obvious.

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## **Suggested Procedures:**

### **Genioplasty or Chin Implant**

Though the subject has normal chin projection for their ethnicity, and a facial convexity angle of 171, augmenting the chin and bringing the facial convexity angle closer to 175 would create a stronger more masculine appearance and bring the chin forward.

### **Orthodontic Treatment**

The subject has crowding of the teeth. For optimal smile aesthetics, a visit to the orthodontist is necessary to start treatment with braces or invisalign.

### **Brow Ridge Augmentation**

The subject overall has a highly neotenous and non-dimorphic face. Their weakest dimorphic trait appears to be the brow ridge, which can be augmented with filler such as Radiesse or a silicone implant.

# Side Profile Facial Morph

We designed the following facial morph to match our recommendations in the previous sections on invasive and non-invasive advice. The aim is for the following facial morph to be realistically achievable rather than aesthetically perfect.

Keep in mind also that any photoshop morph will look uncanny and unnatural since we are doing little more than moving pixels around. A procedure in real life will always look different than a photoshop morph, which could be good or bad depending on the skill of the surgeon.

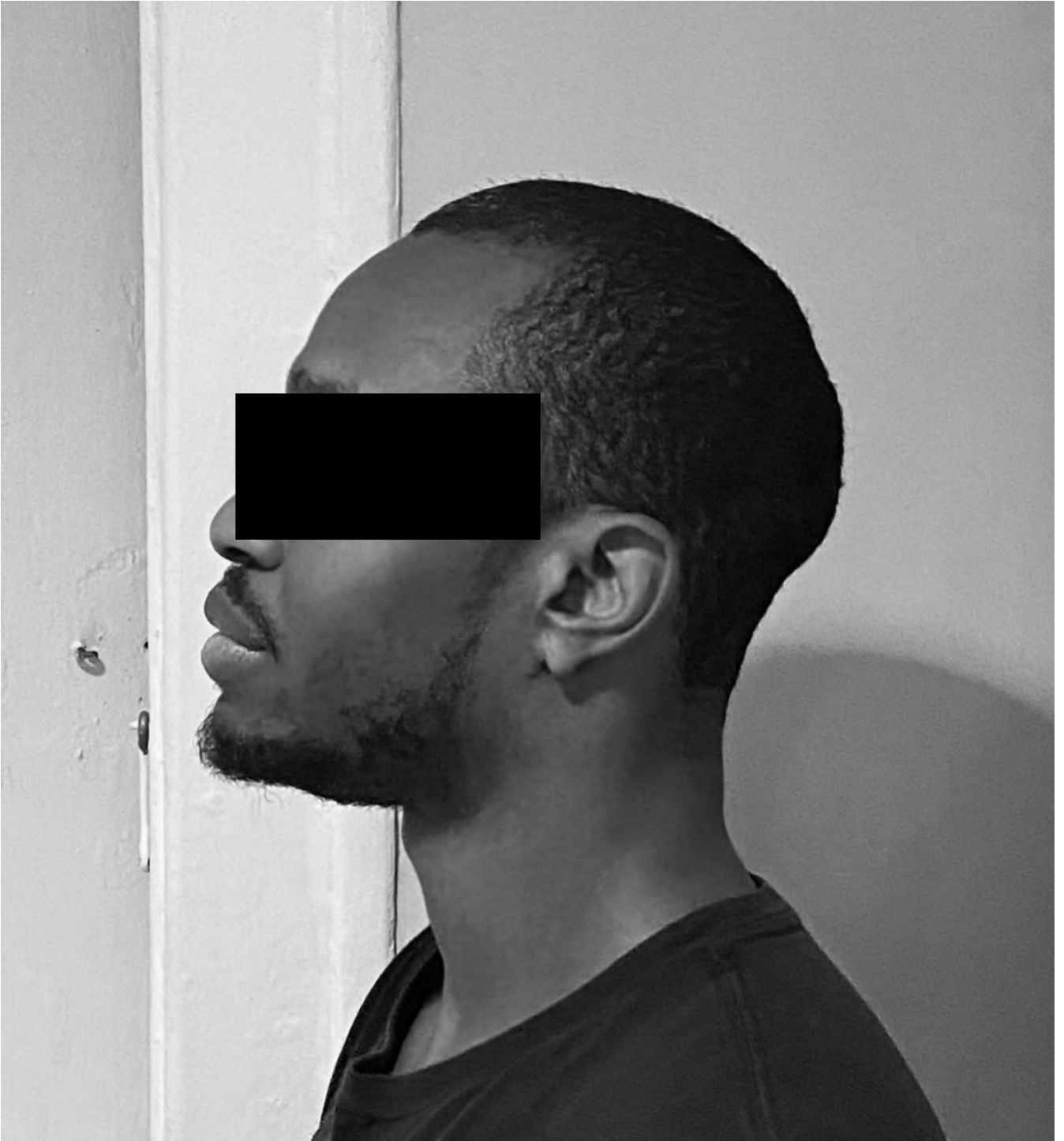
The following adjustments were made:

- Skin smoothed out and sunspots removed. This can be accomplished with retinol and/or yearly fraxel laser.
- Due to the subject's high neoteny score and average masculinity score, we augmented the brow ridge. This can be accomplished with silicone brow ridge implants.
- We augmented the chin slightly to create a stronger lower third. This can be accomplished by genioplasty or a chin implant.

**Before:**



After:



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