

# Metadata Specifications

Personal Data	<b>Sex</b>	Biological sex of the individual on the day of birth. The tracked options are "Male" and "Female".
	<b>Country of Birth</b>	Country of birth of the scanned individual. This is a 3-digit country code defined by 'ISO 3166-1 alpha-3'. If the country is not known by the individual it is a 2-digit continent code. If the continent is not known either it is 'UN' for 'unknown'.
	<b>Age</b>	Age of the individual at the time of the scan. It contains the years and months.
	<b>Roots</b>	To determine the biological origin of the individual, we verbally collect the information by asking for the parents' countries of birth. These are a couple of 3-digit country codes defined by 'ISO 3166-1 alpha-3'. If the country is not known by the individual it is a 2-digit continent code. If the continent is not known either, it is 'UN' for 'unknown'.
	<b>Height</b>	The height of the individual is taken via a wall-mounted height rod without any shoes on. Measurement of the individual is in centimeters and rounded to one decimal place.
	<b>Weight</b>	The weight of the individual (wearing our reference clothing) is taken via a "Tanita MC 580" medical grade scale.
	<b>Body Fat, Water Weight, Muscle Mass, Bones Mass</b>	These recorded body measurements are taken via a "Tanita MC 580" medical grade scale. The weight includes and is made up of the individual's body fat, water weight, muscle mass, and bones mass. [1]
	<b>Body Mass Index</b>	The Body-Mass-Index is calculated using the individual's age, weight, and height.
	<b>Body Type 1</b>	Our category "Body Type 1" is based on the classifications of body types by the "World Health Organization". For adults over 19 years and 1 month old, BMI falls into one of the following categories: Underweight, Normal weight, Pre-obesity, Obesity class I, Obesity class II, Obesity class III. [1] For individuals from the age 5 years up to 19 years (and 0 months), the categories are different and are defined as the following categories: -3 SD, -2 SD, -1 SD, Median, 1 SD, 2 SD, 3 SD. [2]
	<b>Body Type 2</b>	Our "Body Type 2" is based on the classifications of body types by the American Council of Exercise's "Percent Body Fat Norms for Men and Women" and is only given to individuals starting at the age of 18. [3]
	<b>Eye Color</b>	Our classification of the eye color is based on the "Classification of iris colour: review and refinement of a classification scheme"(2011, Mackey et al.). An eye color is given by the comparison of our taken photos of the individual with the description system from the previously mentioned classification scheme. [4]
	<b>Hair Color</b>	The hair color is categorized by checking the taken photos from the scan and doesn't necessarily relate to the natural hair color. The currently following possibilities are White, Gray, Blonde, Red, Brown, Black, Green, Blue, and Violet.
	<b>Hair Type</b>	A hair type is given based on the "Andre Walker Hair Typing System" by visually comparing our taken photos from the scan with the hair typing system afterward. The hair type doesn't necessarily relate to the natural hair if it has been (for example) straightened with a hair straightener or cut down to a length where it only appears as straight as a buzz cut. The hair types are categorized by the following possibilities: Type 1 Straight, Type 2 Wavy, Type 3 Curly, Type 4 Coily. NA usually indicates that the individual has bald and the hair type can not be determined.
	<b>Skin Type</b>	The skin type is categorized by an in-house Renderpeople skin scaling which is based on the Fitzpatrick's Scale. The skin type is given the comparison of the taken photos from the scan with the following example afterward. The possible categories are: 1 Pale White Skin, 2 White Skin, 3 Light Brown Skin, 4 Moderate Brown Skin, 5 Dark Brown Skin, 6 Deeply Pigmented Dark Brown to Black Skin.
	<b>Disability</b>	Disabilities are purely visually checked by image matching after the scan. The current possible options are Blind, Missing Bodypart, Bandaged Bodypart, Casted Bodypart, Walking Impaired, Bowlegs, and Knockknees.
	<b>Tatoos</b>	Tattoos are purely visually checked via the taken photos after the scan. Any tattoos which are visible in the taken photos are being tracked by generally sorting them into one of the following categories that describe where the tattoo is placed on the individual's body: Right Leg, Right Foot, Right Arm, Left Leg, Left Foot, Left Arm, Belly, Chest, Back, Neck, Head. Some tattoos may not be visible in every outfit or pose. Tattoos that aren't visible in any outfit aren't being tracked.
	<b>Piercing</b>	Piercings are purely visually checked via the taken photos after the scan. Any worn piercings which are visible in the taken photos are being tracked by generally sorting them into one of the following categories that describe where the piercing/s is placed on the individual's body: Face, Ear, BellyButton, OtherBodyparts. Some piercings may not be visible in every outfit or pose. Piercings that aren't visible in any outfit aren't being tracked.

[1] Additional Information:  
 Mass of the water (TBW) in the body given in kilograms. Rounded to one decimal place.  
 Mass of muscles (PPM) in the body given in kilograms. Rounded to one decimal place.  
 Mass of the bone mineral content in the body given in kilograms. Rounded to one decimal place.

[2] Source:  
<https://www.who.int/europe/news-room/fact-sheets/item/a-healthy-lifestyle---who-recommendations>  
<https://www.who.int/tools/growth-reference-data-for-5to19-years/indicators/bmi-for-age>

[3] Source:  
<https://www.acefitness.org/resources/everyone/tools-calculators/percent-body-fat-calculator/>

[4] Source:  
[https://www.researchgate.net/publication/230207622\\_Classification\\_of\\_iris\\_colour\\_Review\\_and\\_refinement\\_of\\_a\\_classification\\_schema](https://www.researchgate.net/publication/230207622_Classification_of_iris_colour_Review_and_refinement_of_a_classification_schema)

Outfit Details

<b>Full Body Clothing</b>	In this category, outfits are being tracked that consist of several items that belong together, like uniforms, and would not appear individually in a regular outfit. Example: Overall, Swimsuit. Example: Nursing Scrub, FlightAttendantUniform. Otherwise, this category can contain clothing items that cover the upper and lower body at the same time. Example: Overall, Swimsuit.
<b>Head Accessoires</b>	This category describes any clothing items that are worn either on the head or in the hair. If the head accessory is small and discreet, like a hair tie, the color or any special attributes aren't being tracked. Example: Beanie, Hair Tie.
<b>Face &amp; Ear Accessories</b>	Objects such as piercings, glasses, or masks are noted for the face. If the face & ear accessory is small and discreet, like a piercing, the color or any special attributes aren't being tracked. Example: Glasses, Piercings.
<b>Neck &amp; Shoulder Accessories</b>	This category describes any worn clothing item that is worn on the neck and shoulders. Example: Scarfs, Ties.
<b>Upper Body Clothing</b>	Here any upper body clothing item is tracked, like t-shirts or jackets and similar. Multiple options can be possible if the clothing items are layered on top of each other in a way that they are visible for the most part. Hidden clothing items like undershirts may not be tracked.
<b>Wrist Accessories</b>	This category describes any worn clothing item that is worn on the wrist. Example: Bracelets, Wristwatches.
<b>Hand Accessories</b>	This category describes any worn clothing item that is worn on the hands. Example: Gloves, Rings.
<b>Waist Accessories</b>	This category describes any worn clothing item that is worn around the waist, like belts.
<b>Lower Body Clothing</b>	Similar to upper-body clothing, only clothing items worn on the lower body or legs that are visible are being tracked. Clothing items hidden underneath, like underpants, aren't being tracked. Example: Jeans, Skirt.
<b>Footwear</b>	This category describes any items that are worn on an individual's feet. This excludes socks which are only tracked if the person isn't wearing anything else on their feet. Example: Sneakers, Boots. Additional information: Sneakers and Sportshoes may fall into the same category but are being distinguished if the intended use case are for fashion (Sneakers) or for sports (Sportshoes).
<b>Primary Color 1 &amp; 2</b>	This describes the one or two most prevalent colors on a single clothing item. If a color is only present in very little quantity it is not being tracked. In the following example, the t-shirt is tracked as blue, and the yellow decoration is ignored. The option "Multicolored" describes the case if three or more colors are the most prevalent on a single clothing item.
<b>Special</b>	This category describes if one or more specific attributes are present in the clothing item. Currently, the tracked attributes for this category are Camouflage, Holes/Ripped, Denim, Knitted, Leather, Motif, and Pattern.
<b>Outfit Type</b>	The Outfit Type describes the general look of the entire clothing the individual is wearing. The current categories for this are: Business, Casual, Elegant, Healthcare, Sleepwear, Smart Casual, Sportswear, Swimwear, Traditional, Underwear, Winter, Workwear and Reference Clothing. Additional information: Reference Clothing is referring to the form-fitting outfit we scan individuals in.
<b>Outfit Places</b>	This category describes if one or more specific attributes are present in the clothing item. Currently, the tracked attributes for this category are Camouflage, Holes/Ripped, Denim, Knitted, Leather, Motif, and Pattern.
<b>Profession</b>	This category describes if the outfit is related to a corresponding profession. It is only given to an outfit if it fits. Examples: Cook, Mechanic.
<b>Season</b>	This category describes the in which season of the year this outfit is most likely being worn. The options are Spring, Summer, Fall, and Winter.

Scan Pose Details

<b>Poses</b>	Poses describe the general posture of the individual in every scan. Different activities can be performed in each pose. The currently used or planned poses are: Standing, Walking, Sitting, Running, Lying. Additional information: The pose "A-Pose" is a specific stance that is primarily used for creating rigged 3D Models
<b>Activity</b>	<p>Activities describe the action the individual might be performing in the capture. Multiple activities are given as a list. The following list is describing the general idea of each activity.</p> <p><b>Adjusting Outfit:</b> Fixing or adjusting clothes like buttoning a shirt, tying shoes, or pulling up an arm sleeve.  <b>Blinded:</b> Being blinded by the sun or another bright light source.  <b>Coughing:</b> Either coughing into the hand or the elbow.  <b>Dancing:</b> In the motion/act of dancing.  <b>Exhausted:</b> Hanging body posture caused by exhaustion or tiredness.  <b>Fixing Hair:</b> Adjusting or fixing the hair-do.  <b>Freezing:</b> Posture during exposure to low temperatures.  <b>Holding:</b> Either holding a small unidentifiable object or a larger object like a bag, food item, or a jacket.  <b>Jogging:</b> A casual jogging motion, nothing compared to a full run or sprint.  <b>Laughing:</b> Expressing laughter even outside a conversation. This activity may be given if no other activity is being performed.  <b>Leaning:</b> Leaning either against a wall while standing, leaning on a table / an armrest while sitting or leaning to the side while walking.  <b>Look At Close:</b> Leaning forward to closer inspect an object in front of the individual.  <b>Look Hands:</b> Inspecting their own hands/fingernails.  <b>Looking:</b> Casually looking around and may be compared to waiting around. This activity is only given if no other activity is being performed.  <b>Neutral:</b> Neutral describes the individual doing "nothing" and may be used for reference purposes.  <b>Pointing:</b> Pointing in a direction generally using a finger.  <b>Posing:</b> Being photographed and doing a pose for it.  <b>Reaching:</b> Trying to grab something that is either on the floor, in front of the individual or higher above.  <b>Rub Eyes:</b> Rubbing the eyes  <b>Scratching:</b> Scratching a part of their own body which may be the back of the head, face, arm or similar.  <b>Searching:</b> Taking something out of a pocket or bag.  <b>Stretching:</b> Either stretching a larger part of the body like arms and shoulder or in a more discreet manner like stretching wrist/finger joints.  <b>Talking:</b> Active in a conversation with one or more people.  <b>Thinking:</b> Usually portrayed by thoughtfully looking into the sky and crossing the arms or one hand on the chin.  <b>Waving:</b> Greeting someone with a hand gesture.  <b>Yawning:</b> Expressing tiredness by yawning either with a hand in front of the mouth or without.</p>

<b>Scan Pose Details</b>	<b>Direction of Attention</b>	The Direction of Attention, abbreviated DoA, describes where the person's attention/focus is directed. This is not purely about head orientation or in which direction the individual is rotated. It's being evaluated where the model would look in a scene, which is particularly recognizable by the eyes. Generally speaking, the "front" is defined by the body alignment. From there on, the individual might be looking in one of the following directions: Left, Right, Above, Below, Behind, atPropHand, None, or Front. Additional information: The option "at Prop Hand" describes the individual looking at either an object hold by their own hand or the hand itself. "None" describes in most cases that the eyes are closed and the attention isn't directed towards any direction.
	<b>Mood</b>	The mood describes the individual's facial expression in each taken photo/scan. The current option for this category are: Angry, ClosedEyes, Curious, Frown, Happy, Neutral, Questioning, Sad, Scared, Smiling, Surprised, Tensed, Tired, Upset. The mood describes the individuals facial expression in each taken photo / scan. The current option for this category are: Angry, ClosedEyes, Curious, Frown, Happy, Neutral, Questioning, Sad, Scared, Smiling, Surprised, Tensed, Tired, Upset.