# CSV Columns

1

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## Contents

## TrialID

Numerical id of the trial. This is an auto-incrementing integer. This number is device specific, different devices will have their own trial 1, trial 2, trial 3, etc. If the application is uninstalled and then installed again, this number might reset.

## UserID

a user identifier. It consists of AASG. AA is age, represented by a two digit integer. S is sex/gender, represented by the letters M for Male, F for Female, O for Other, X for No Answer (N/A). G is for whether the user wears glasses or not, represented by the letter Y for Yes or N for No.

## TobiiTimestamp

This is from Tobii's SDK. Internal eye-tracker timestamp, in long format.

## Frame

The Unity3D frame during which this data was recorded.

## CurrentImageFilename

The name of the image file currently being displayed.

## CurrentAudioFile

The name of the audio file the microphone is currently recording to.

## ImagePositionx,
## ImagePositiony,
## ImagePositionz

The position of the GameObject where the image is displayed, in Unity3D. This object has no rotation applied to it, and its "front face" (the face where the image is rendered) is facing towards negative Z.

## ImagePixelSizex,
## ImagePixelSizey

The pixel width and height of the current image.

## ImageSizex,
## ImageSizey

The size (width and height) of the GameObject in Unity3D where the image is displayed. 1 unit = 1 meter. Currently the height is kept at 1 unit, and the width is adjusted to match the image's width/height ratio.

## HeadPositionx,
## HeadPositiony,
## HeadPositionz

Position of the camera in Unity3D

## HeadForwardx,
## HeadForwardy,
## HeadForwardz

Forward vector of the camera in Unity3D

## HeadUpx, HeadUpy, HeadUpz

Up vector of the camera in Unity3D

## GazeRayHitx,
## GazeRayHity

The hit point of a raycast, performed using the Gaze Ray, against the GameObject where the image is displayed. The coordinates are in normalized texture coordinates, with 0,0 being the middle of the image, -0.5,-0.5 being the bottom left corner and 0.5,0.5 being the top right corner.

## GazePixelRadius

The radius, in image pixels, of a 1 visual degree circle. This value is rounded to the nearest integer. This value varies depending on the distance from the camera to the image. It is currently calculated at runtime using the distance from the Gaze Ray Origin and the GazeRayHit (the point on the image the user is looking at).

## GazeRayWorldOriginx, GazeRayWorldOriginy, GazeRayWorldOriginz

This is from Tobii's SDK. The 3d point in Unity3D where the Gaze Ray originates from. It's between the eyes, so it is essentially equal to the HeadPosition. Stored for sanity check.

## GazeRayWorldDirectionx, GazeRayWorldDirectiony, GazeRayWorldDirectionz

This is from Tobii's SDK. The vector representing the Gaze Ray's direction in Unity3D. This is in world space coordinates (as opposed to being in the camera's local coordinate system).

## GazeRayIsValid

This is from Tobii's SDK, just a bool representing the SDK's estimation of reliability of the Gaze Ray it calculated.

## GazeType

The type of eye movement captured in this timestamp. 1 is a fixation, 2 a saccade, 3 a blink. Blink detection comes from the IsLeftEyeBlinking and IsRightEyeBlinking values below, if either is true then I consider it a blink. A saccade is any movement that exceeds 0.2 degrees or moves faster than 35 degrees per second, or has an acceleration greater than 9500 degrees per second squared (same values used by REFLACX)

## ConvergenceDistance

This is from Tobii's SDK. An estimation of the distance where the gazes of both eyes converge. Reliability falls off a cliff beyond 0.8~1 meter.

## ConvergenceDistanceIsValid

This is from Tobii's SDK. A bool representing the reliability of the ConvergenceDistance value.

## LeftPupilDiameter

This is from Tobii's SDK. The estimated diameter, in millimeters, of the left pupil.

## IsLeftPupilDiameterValid

This is from Tobii's SDK. A bool representing the reliability of the LeftPupilDiameter value.

## IsLeftEyeBlinking

This is from Tobii's SDK. A bool representing whether the left eye is blinking.

## RightPupilDiameter

This is from Tobii's SDK. The estimated diameter, in millimeters, of the right pupil.

## IsRightPupilDiameterValid

This is from Tobii's SDK. A bool representing the reliability of the RightPupilDiameter value.

## IsRightEyeBlinking

This is from Tobii's SDK. A bool representing whether the right eye is blinking.

## DeviceID

A unique device identifier, in UUID format.

## DeviceModel

A string representing the device maker's nomenclature for ths device model.

## SoftwareVersion

The prototype's version (currently 0.2)