POR Vision: Comparing Machine Learning Algorithms for Automatic Point of Regard Detection

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INTRODUCTION

Eye tracking is an increasingly popular method of human-computer interaction. The most common form of eye tracking is video-oculography (VOG), in which a camera captures images of the eyes illuminated with infrared (IR) light then uses the location of both the pupil and the corneal reflection (CR) of the IR light to determine the point on a display where the user is looking (this point is called the point of regard, or POR).

Typically, an initial calibration period is required to identify the orientations of the pupil and CR when looking at different regions of the display. Then, during gaze estimation, the eye tracker will interpolate between the calibration points to identify where the eye is looking. The accuracy of this interpolation depends on the quality of the calibration data and the algorithm used.

Our research will use machine learning algorithms to perform this interpolation between calibration points and ultimately determine the POR of a gaze.

BACKGROUND

Brief survey of what's been done here. Also mention how our work will be different. [1] [2] [4] [5] [3]

RESEARCH PLAN

Preliminary plan and milestones here.

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