Face Detection and Estimation through a JavaScript Library: Constrained Local Models Tracker

Alex Clemens

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Professor Alexandra Papoutsaki

Abstract

My topic for the Senior Project in the Spring is based off the research done by Professor Papoutsaki at Pomona College. Her work heavily relies on Computer Vision. A product of her research can be seen in her WebGazer online application (viewable on her personal website), which uses JavaScript to map the user?s gaze location to a point on the screen in real-time.

Summary of what the paper will be covering

1. Improving CLM Tracker

2. Uses JS and HTML to track the face

3. MUCT dataset and others

4. "In this paper, we will explore the shortcomings of the library and offer potential improvements to the existing code."

Acknowledgements

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Whatever the outline is w/ page numbers for where to find things

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Introduction

1. Uses of Face Detection

2. Why it might be important to study and improve

3. CLM Tracker

Chapter 2

Background

Chapter 3

Data

3.1   MUCT Dataset

3.2   Hypothesis

1. From South Africa

2. Diverse, but has weird filters and not diverse enough for our hypothesis

3.3   Photos outside of MUCT

Chapter 4

Approach

4.1 Using built in tools as a failed approach

4.2 Manual Solution

4.3 Using Node?

4.4 Combining Work with Chinasa's Classifications

Chapter 5

Results

5.1 Analysis

Chapter 6

Future Work

6.1   Big Problem, Still More to Do

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