Developing a web application for affective computing

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Introduction

- Lack of diverse, complex facial expression data that is labeled beyond the six basic emotions: happiness, sadness, fear, anger, surprise, disgust
- Need to understand human affect in human computer interaction
- Develop systems that can respond intelligently to natural human emotional feedback
- For example, in retail, the system can guide customer service responses and gauge the effectiveness of customer service at contact centers and retail locations

Methods

Bootstrap, HTML, JS, CSS, Flask, aws

Results

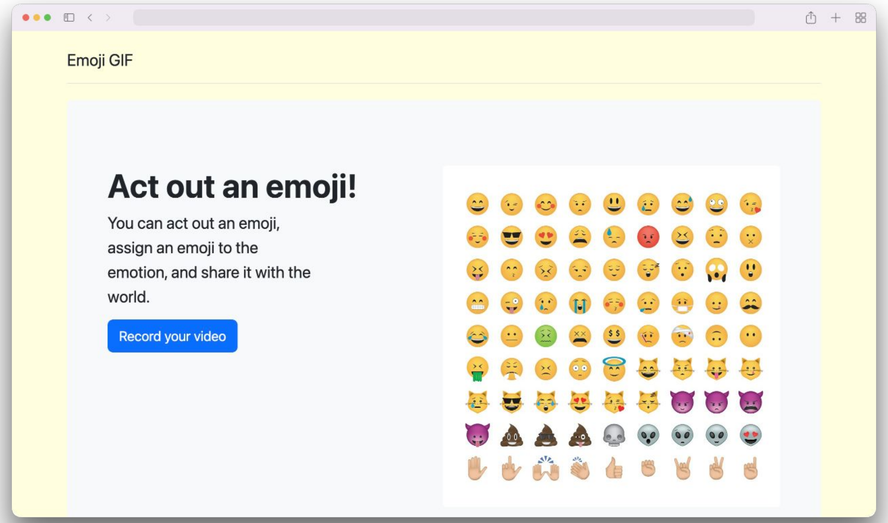

Figure 1. Home Page
Users would agree to a consent form, approved by the IRB, before proceeding to record a video.

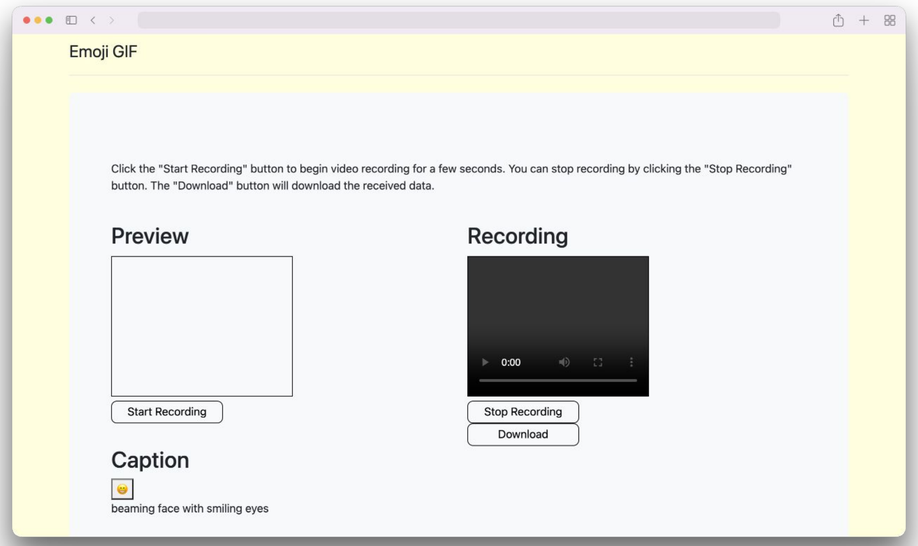

Figure 2. Video Page
Users would record their short gif video and can preview their video. Users would add a emoji caption to the video with the text being saved and uploaded to AWS.

Next Steps

- Evaluate and enhance the overall design and interface of the application to improve user experience using iterative user testing methods
- Run human computer interaction user studies on the web application through extensive recruitment on campus and online
- Train machine learning models using the diverse emotion dataset, splitted into training and testing datasets, and adjust model based on results

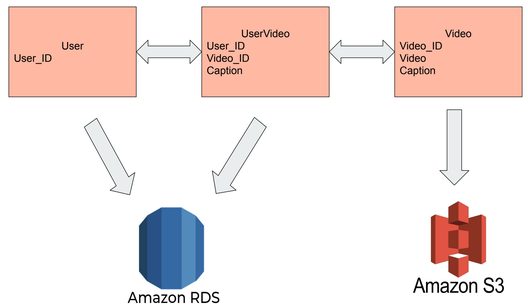

Figure 3. Data Model
All metadata will be stored in Amazon Relational Database Service while the video will be stored in Amazon Simple Storage Service.

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