



Facial Emotion Detection

By

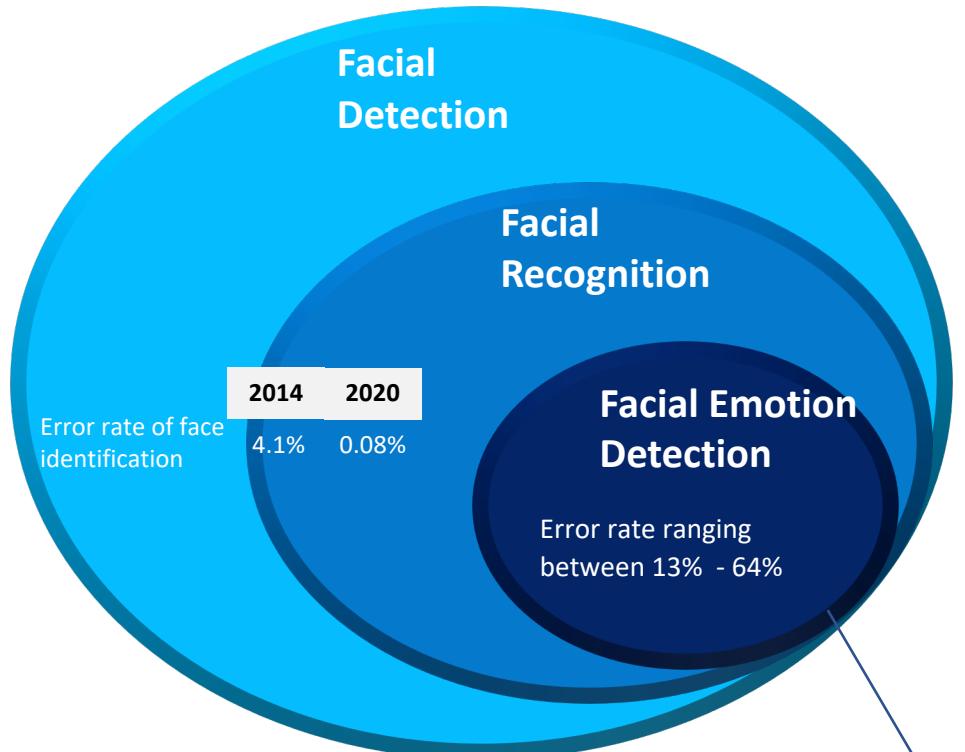
- Ram Sake
- Ravi Selva
- Travis Le

Agenda:

- **Overview of facial emotion detection**
- **Facial Emotion Detection Impact to Industries**
- **How it works (MVP)**



Overview of Facial Emotion Detection



Facial Emotion Detection is the process of detecting human emotions from facial expression.



The human brain recognizes facial emotions automatically.

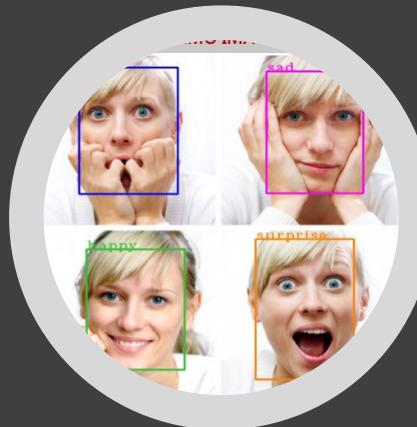


Technology has now been developed that can recognize facial expression as well.

Facial Emotion Detection Adapted Wildly in 4 Major Industries

1. Health Care

- Helping to decide when patients necessitate medicine
- Assisting the physicians to determine who to see first



2. Automotive industry

- Focusing on making cars more personal and safe
- Building smart car features by understanding the human emotions
- Alerting the driver when he/she is feeling drowsy



3. Video game

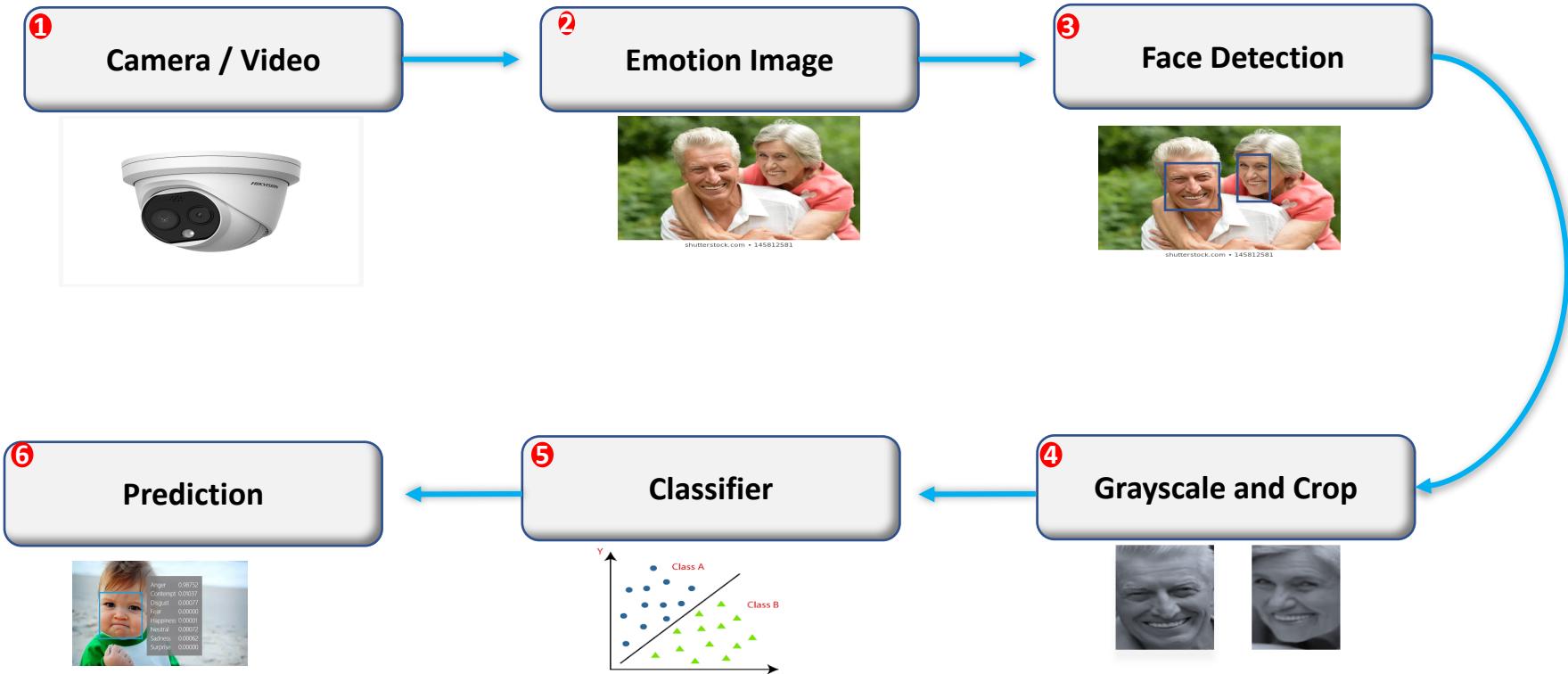
- Evoking a particular behavior & set of emotions from the gamers
- Testing the game tester and getting feedback to make the final product
- Understanding the user experiencing in real-time

4. Social marketing

- Tailoring the marketing on the spot of emotional reactions



High level Workflow of Facial Emotion Detection



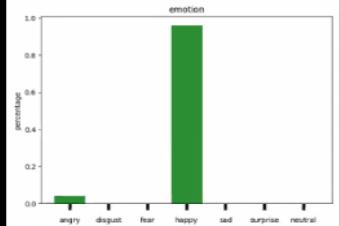
User Friendly Platform

Facial Emotion Detection Prototype

1 Choose File No file chosen
Mask

2 Upload

3 Original Image 4 Prediction Outcome 5 Behavior Statistics



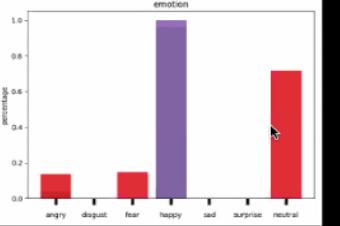
© 2020 Group 3, Inc. Presented By Ram Sake - Ravi Selva - Travis Le

Facial Emotion Detection Prototype

1 Choose File No file chosen
Mask

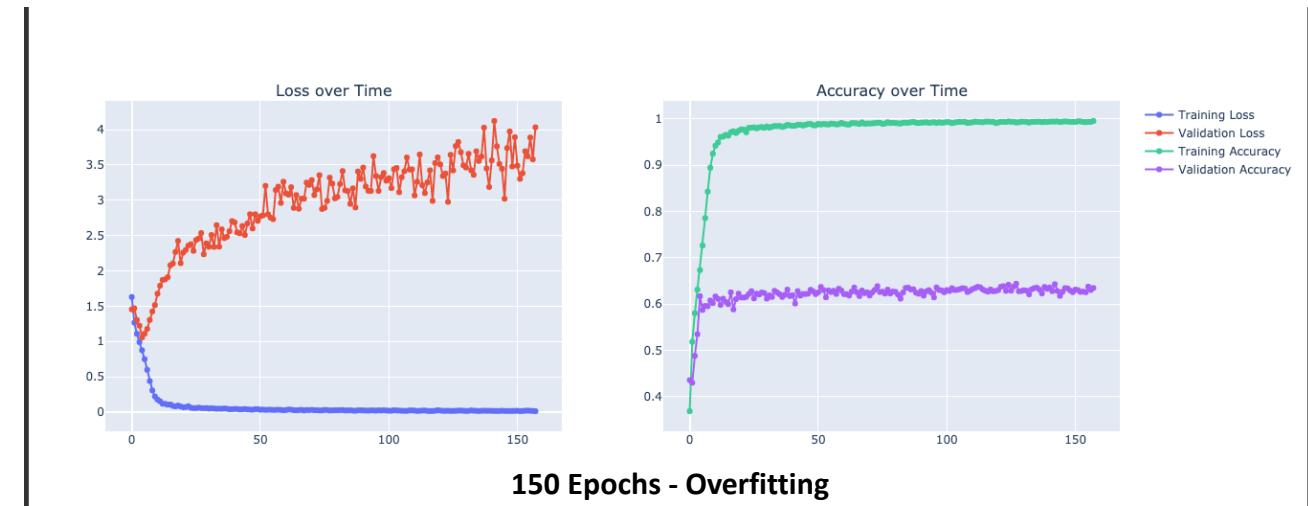
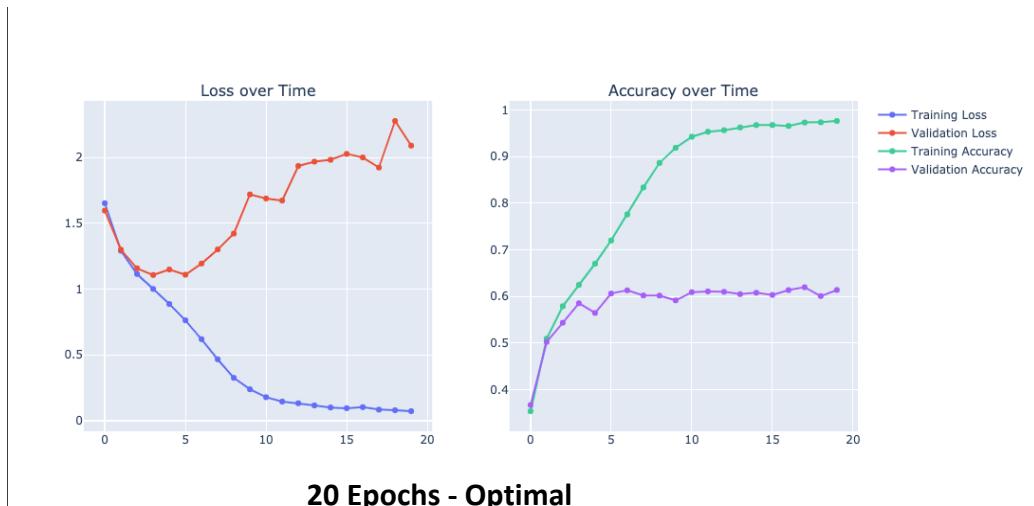
2 Upload

3 Original Image 4 Prediction Outcome 5 Behavior Statistics



© 2020 Group 3, Inc. Presented By Ram Sake - Ravi Selva - Travis Le

Emotion data model: Optimal training vs. Overfitting



Technology implication:

- Convolutional Neural Network with 2 levels of deepness
- Activation as relu, softmax
- Optimizer as Adam

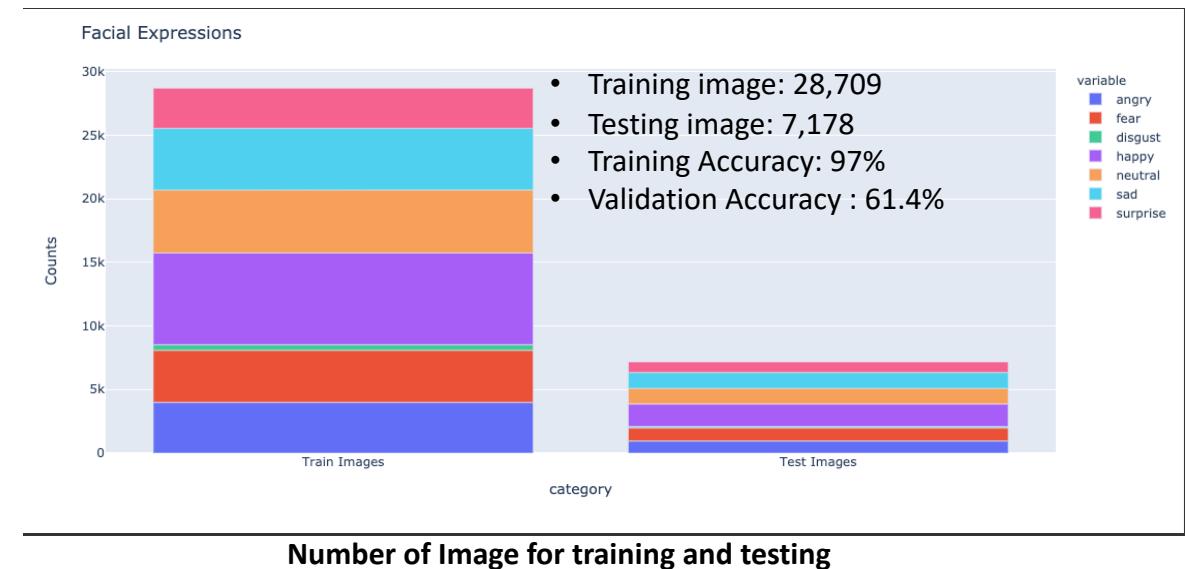
In scope:

- Emotion detection in the picture and video
- Behavior statistics

Future scope:

- Live mask detection
- Live emotion detection
- Real-time behavior analytics

Source: team analysis



Demo





Special “THANKS” to:

- *Alexis Wong Baird*
- *Amanda Robinson*
- *Nino Yosinao*