MOOD DETECTION & VISUALIZATION

Team Members :

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Team Members Role:

We both will be equally working on both Front-end and Back-end development, along with visualizations on Google Cloud.

Type of project:

Development and Visualization.

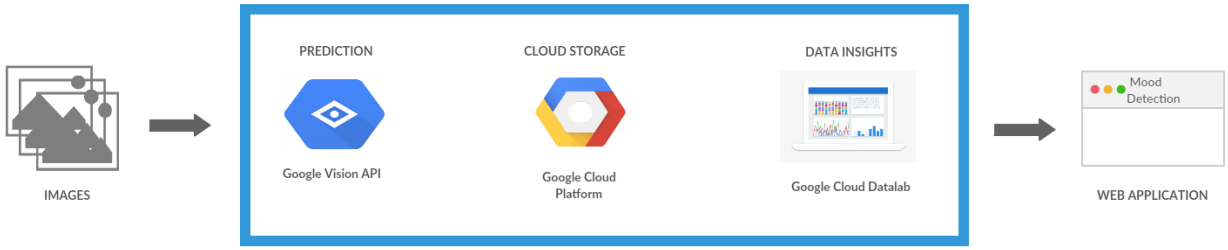
Motivation:

Data Analytics has become very popular, where data is examined and meaningful insights are derived. People deal with different emotions each day and every minute of their life. These emotions could be a result of their responsibilities, relationships or any hardships they come across. We would like to study the emotions people experience say a day, weeks, months and so on and provide suggestions based on their mood detected.

Objective:

The core idea of this project is to classify a person's mood using his facial expression and provide certain visualizations according to his mood, to give useful insights about his pattern of a particular type of emotion, helping him take measures for mood management. Initially, we start by detecting a person's mood using Google Vision API. This image can be fed to our API model that detects the emotion and classifies the image either into happy class, sad class, anger class or suprise class. We will track the emotion of the person on a day-to-day basis. We can narrow it down to an hourly basis to get more insight on how the mood varies. We will then be storing all this information into Google Cloud. Using this information, we can use Google Cloud DataLab to generate insights and visualizations (analysis charts) about the person's mood at every hour of the day. We can also generate insights on a week, month basis too. The person can use this insight to take measures on mood management.

Block Diagram:



Tools and Languages, Platforms Used:

- API: Google Vision API
- Languages: Scala/Python/Javascript/Node.js/SQL
- Cloud Platform: Google Cloud
- Software Platform: Pycharm
- Visualization Tool: Google Cloud DataLab

Evaluation/Implementation/Development Plan:

- Performance parameters: Accuracy, precision
- Type/Source of data: Images of faces of type: Happy, Sad, Angry, Surprise
- Type of analysis: Visualization of mood detection on an hourly basis

Expected project outcome:

An application which predicts mood and analyses the pattern of emotions of each person considered. Provide suggestions to improve their mood pattern.

Individual learning outcome (what would you get to learn out of this project):

- Learn to use Google Vision API for image prediction.
- Learn hosting web application on Google cloud platform.
- Learn to gain insights on our data and visualize using Google Cloud DataLab.