SWS3004
Team No.
28

FeedbaClass

Class Feedback using Facial Recognition

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Motivation

- Difficult to obtain real-time feedback from a group of people.
- Facial expression will be a powerful tool to judge the response of a crowd.

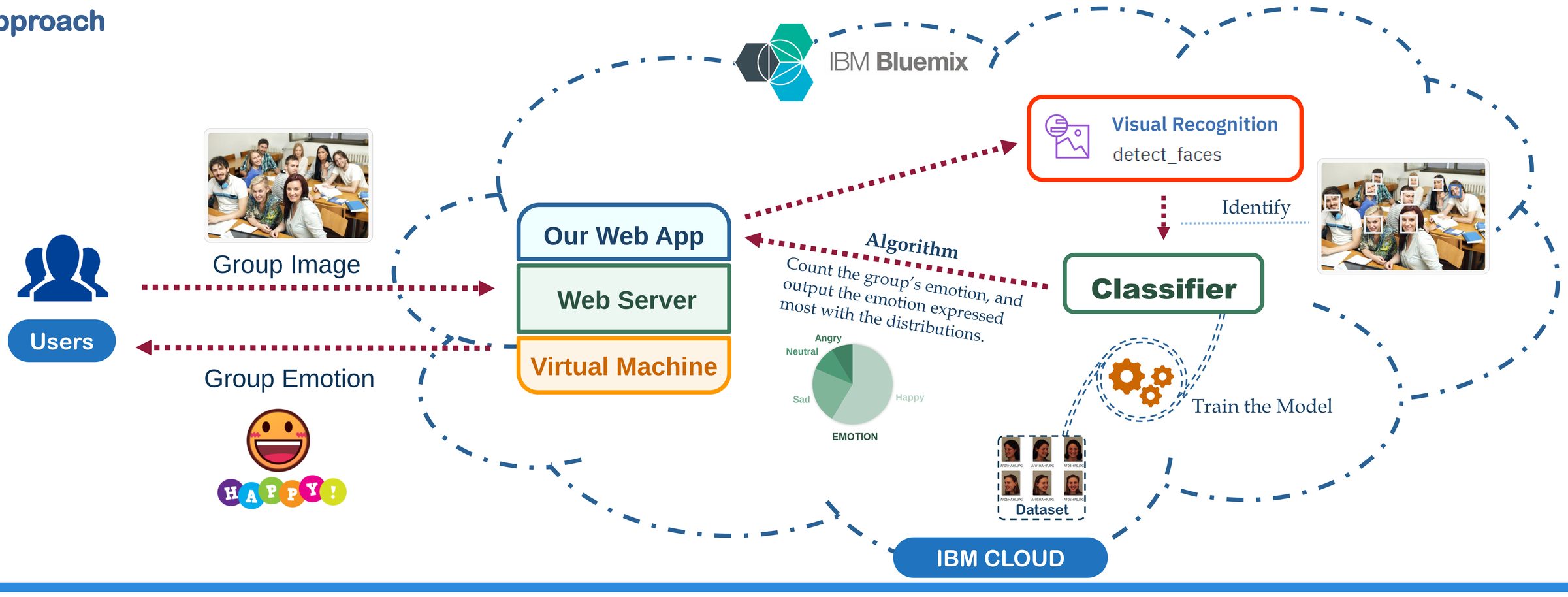
Objective

- Develop a cloud-based face-recognition system to obtain the group emotion.
- Emotion feedback could be used to help teachers optimize the classroom teaching effects.

How to judge a crowd's response? Are they …

- Happy ?
- Surprised ?
- Neutral ?
- Angry ?
- Sad ?
- Disgust ?

Approach



Implementation

➢ Example- Upload Image

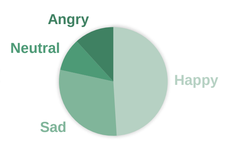
Upload

Classify

✓ **9 persons with:**
5 Happy, 3 sad,
1 angry, 1 neutral

Whole emotion:

Distribution:



Advise:
✓ Good lesson!
✓ Keep going and try to attract all the members!

➢ Example- Use Camera

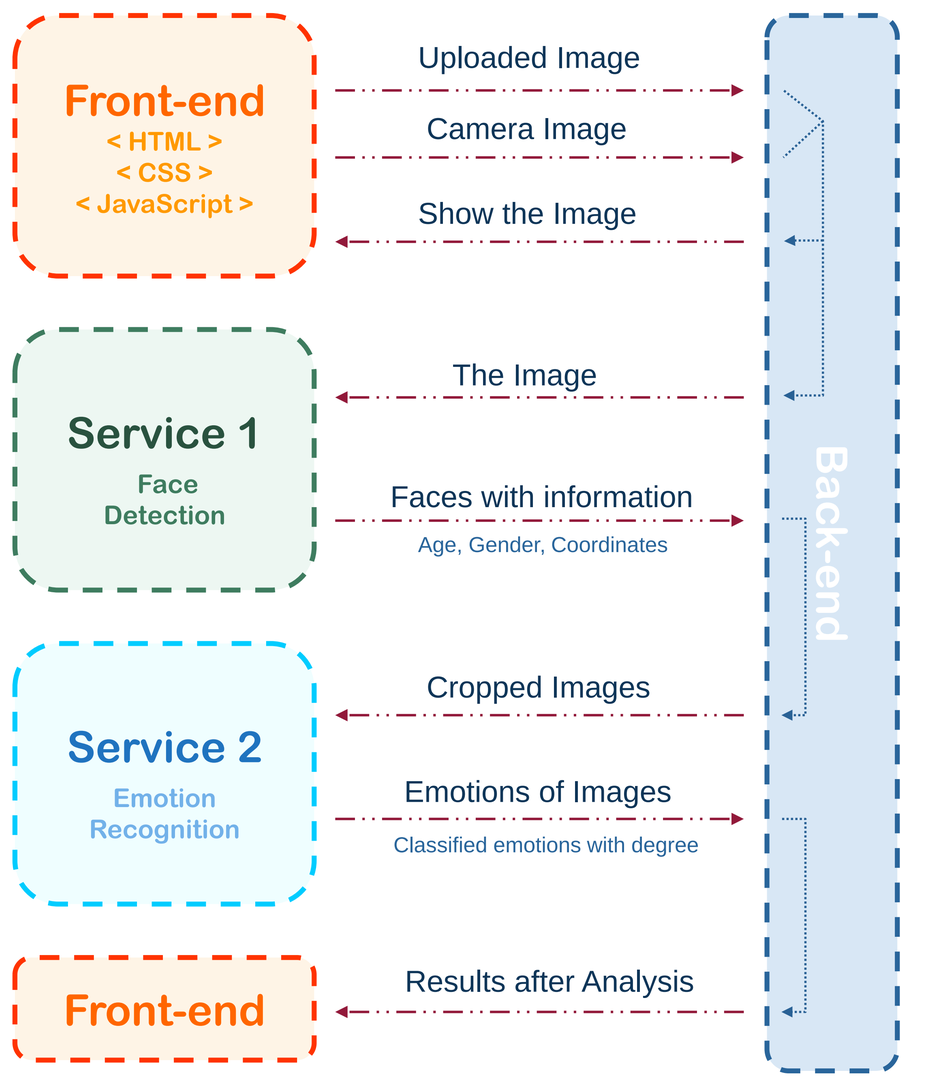
Take photo

Classify

1 person with:
Happy emotion

- ✓ Use KDEF dataset to train our emotion recognition model.
  6 classes with emotions of happy, sad, angry, surprised, disgust, neutral
  35 males & 35 females, with 5 different angles. (562 * 762 pixels)
- ✓ Perform Visual Recognition service from a Node.js web server.
- ✓ The feedback of the crowd is based on the most expressed emotion.

➢ Interactions



Conclusions

Lessons

- Cloud Foundry
- Machine Learning
- Data Analysis
- Web Application
- Use Bluemix as PaaS Platform to build Web App

IBM Cloud

Limitations

- ➢ The training code of the custom model is defined by the Watson, maybe with poor performance.
- ➢ Time and Quota of the Bluemix limited to train a better model.
- ➢ Better datasets will be helpful to the training model.
- ➢ Data transmission is delayed between cloud server and web server.

Other Use Cases

✓ As a feedback-obtain Application, *FeedbaClass* could be used in other cases to get the real-time feedback, like:

Movie Assessment | Concert Assessment | Customers Feedback