Audience engagement

Emotion detection
By Apex team

APEX

Now better than never

I've learned that people will forget what you said, people will forget what you did, but people will never forget how you made them feel.

Maya Angelou

Lack of input from audience

For example: lack of input from students to educators.This problem reduces the quality of education by a lot.

However,you may argue that there are some very experienced educators and lecturers that can pretty much understand the condition of of audience and react to it.

But are the **all** educators and lecturers are experienced that they can understand audience easily?

NO!

According to the statistics of famous
" The Edvocate" american journal.There is a big
problem of <u>achievement gap</u> in the education
nation wide.It also states that reason for that is
lack of <u>recognition</u> of students by educators.In
another words, the problem is in lack of paying
attention to students who left behind.

Link to the article: https://www.theedadvocate.org/10-reasons-the-u-s-education-system-is-failing/

So what is our solution ?

Our solution is to detect the emotion of the audience and deliver it to the appropriate place
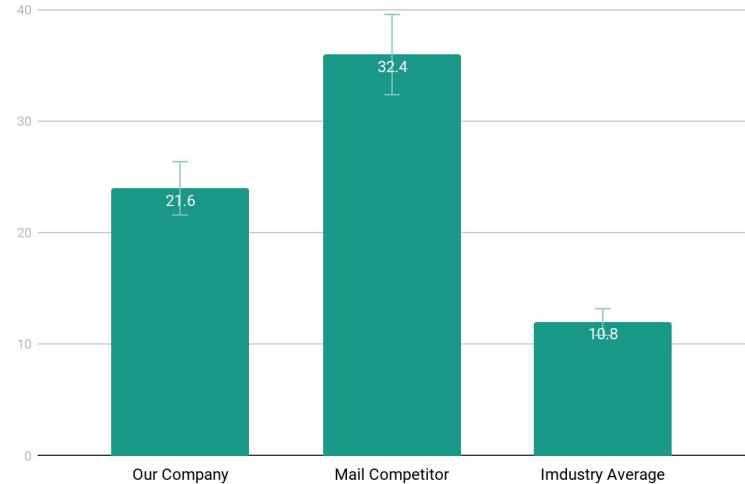
By means of place I mean:

- The real time delivery of statistics of emotion gathered ,for instance, over past 10 or 5 minutes of engagement

- The delivery of statistics to academic department,in order to analyze the quality of lessons,seminars,lectures and so on.Which would give ability to make better decisions in their educational institution
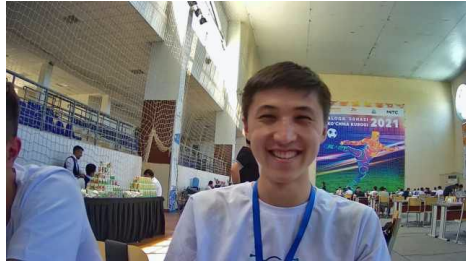
What about monetization ?

1.Public organizations(such as schools and universities) 2.private companies(such as restaurants and concert makers)

Net Promotor Score
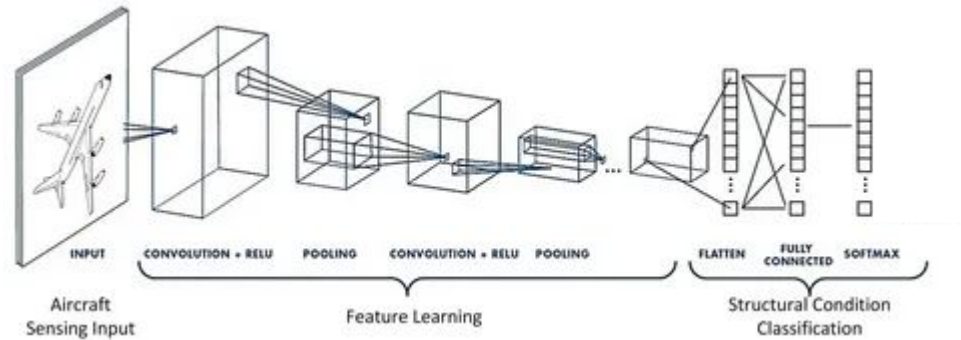
How Emotions are detected?

Get img → Img to Grayscale → Detect faces by HAAR Classifier → Apply DL model into faces → Display top 2 emotions

Model metrics

Used framework: Tensorflow

Accuracy score: 66.4%

Trained on 96/200 epoch

Timeline

JUN	JUL	AUG	SEP	OCT
Collect more images	Improve the existing model	Prototype	User testing	Final Prototype
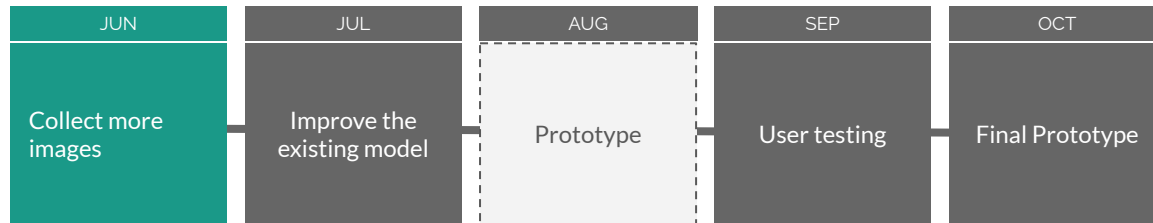
What if we won money?

We will spend money on:

1. Training model in super computer
2. Collect more national faces into dataset
3. Creating and automating analytics report of emotions
4. Deploying into fast-server

What do we need to fully implement

1. Trustful dataset of faces with different emotions
2. High resolution camera to improve the quality of image collection
3. Good knowledge in eigenfaces, fisherfaces, Dr. Paul Ekman works on FACS
4. Financial fund to cover the cost of good camera, GPU cost in google colab

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