

# 1. Resume Highlighter

## *Overview*

Applying jobs for the job seeker has become very easy, but daunting for the recruiter or the hiring manager. So large and small companies can use an automated application tracking system to do the first pass at resumes in order to shift through large group of job applicants, and organize those applicants.

The main goal is to simplify the life of the recruiter by highlighting the important areas in the resume.

## *Ideathon*

Brainstorm in team come up with ideas which sections are required in a resume to understand the skill set of a candidate. Parse the resume to find the related text and finally read out the text by converting the text to speech. You can look at recruiter's view (<https://www.youtube.com/watch?v=xFngomrq58o>) on resume to start with.

Now it's your turn to propose innovative ideas to identify the candidate eligibility and read out those important aspects in a candidate resume.

## To Do Task

1. Identify the keywords for assessment of the candidate in the recruiter perspective.
2. Parse the text document for those keywords and highlight those keywords with Colour or identifiable difference.
3. Extract and organize the readout points in to best way.
4. Read the organized points by converting the text to speech. If any API is used need to address why that is cost effective way to utilize the text to speech conversions.

## **Data:**

100000 resumes to be obfuscated.

Mentor:

Shubham

## 2. Ideal Candidate Identifier

### *Overview*

Companies progressively accepting the value of recruiting and retaining multicultural employees by maintaining the gender balance and ethnic group. The multicultural provides advantage to the worker and company's ability to adapt, grow and sustain a competitive advantage in the modern business landscape. Hiring a candidate for any company is an expensive process and the process of recruitment is hampered by candidate's fake experience. Moreover, in country like USA many skilled immigrants provide fake work permit to fetch contract jobs.

Identifying the candidate gender, ethnicity, fake experience and fake work permit play a key role in maintaining the multicultural environment by hiring an ideal candidate.

### *Ideathon*

Brainstorm in team to come up with ideas which features are required in a resume to understand the gender, which ethnic group the candidate belongs to, fake experience, fake work permit provided information of job applicants in USA. You can refer to recruiter's guide to identify fake work permits (<http://it-recruiter-guide.blogspot.in/2016/03/how-to-identify-fake-h1bs-and-opts.html>) to start with.

Now it's your turn to provide innovative ideas to identify the candidate eligibility for the position and how you handle the missing data.

### *To Do Task*

1. Identify the features to distinguish the gender and ethnicity based on the candidate name.
2. Identify the features required to differentiate the fake experience and work permits.
3. Apply to any machine learning technique to classify. Propose how the missing data is handled in detecting information.

Data:

To be crawled By Amjad

Mentor:

Dileep

### 3. Intelligent Event Scheduler

#### *Overview*

In a world where messaging apps have become the most popular form of communication, Chatbots are becoming the primary way customers communicate with business. Businesses use Chatbot to talk to one-to-one with 1000's of customers via messaging. Instead of calling your business to setup an appointment, customers can use Chatbot to schedule something right away. Extending this idea in HR Chatbots communicate between the candidate and the recruiter to schedule a meeting or an appointment.

#### *Ideathon*

Brainstorm in team to come up with ideas how a Chatbot can intelligently interact with recruiter and candidate to fix a meeting slot. You can refer to event scheduler Chatbot (<https://www.youtube.com/watch?v=pxJiYx-D3HE>) for you to start with.

Now it's your turn to provide innovative ideas in a scenario when a candidate and recruiter communicate with the Chatbot. Chatbot should be intelligent enough to handle at least two people chat simultaneously asking the required details, check with the calendar of the recruiter and fix a meeting.

#### To Do Task

1. Identify the required information in the text.
2. Check the events in the recruiter's calendar, and intelligently propose the available timings.
3. Should be able to handle at least two simultaneous chats with Candidate.
4. Handling of Newly proposed time or Rejection of meeting request

Extension (optional):

Should be able to schedule a meeting with more than 2 participants

#### **Data:**

Data can be simulated if required, or more details of the textual conversation data can be updated soon.

Mentor:

Ankit

## 4. Arya Reactified (only for Leoforce)

### *Overview*

This new Avatar of Arya should take user experience to the next level by the use of new gen UI framework React JS. It should be blazing fast with great user experience.

### *Ideathon*

Brainstorm in team to come up with ideas on how to make Arya super interactive with React JS.

### To Do Task

1. Consume Arya REST APIs to create a lightweight single page application.
2. Add new APIs which are required for new Avatar of Arya.
3. Static resources should be loaded from the CDN i.e. Cloud Front
4. JS and CSS file should be compressed.
5. Minimization of perceived delay with smart technique
6. Effective use of cache headers and E-tag to speed up the page load time

Mentor:

Bhavana and Naveen

## 5. Discussion Decoder

### *Overview*

Any discussion can convey different opinions and its prospective. Weighing the conversation pros and cons, a rational decision can be made.

### *Ideathon*

Brainstorm in team to come up with ideas on how a conversation (audio, video or textual) can be differentiated and understood for each individual and come up with overall analysis of what is the opinion about the conversation happened. You can refer to audio sentiment analysis in the video ([https://www.youtube.com/watch?v=sOhbwJ\\_ZCoQ](https://www.youtube.com/watch?v=sOhbwJ_ZCoQ)) to start with.

Now it's your turn to provide innovative ideas in a scenario when multiple people are speaking, how to identify the speakers, and what are they are talking about and analyse the conversation.

### To Do Task

1. Given an interview audio file between the recruiter and a candidate, identify the each speaker in the conversation.
2. Separate the conversation of each speaker by converting the conversation in to text.
3. Give an overall analysis of each speaker in the conversation (positive/ negative/ neutral/ didn't show the perspective).
4. Overall sentiment of the discussion

### **Data:**

Details of the data can be updated soon.

Mentor:

Dileep

## 6. Photo Analyser

### *Overview*

There are certain job functions which requires certain personality traits such as being  
Polite for Receptionist  
Smiling for Air hostess on interaction  
Confident for Sales representative

### *Ideathon*

Brainstorm in team to come up with ideas, to identify whether a person have the required personality for given position. You can go through ([http://truecenterpublishing.com/photopsy/people\\_pics.htm](http://truecenterpublishing.com/photopsy/people_pics.htm)) for you to start with.

Now it's your turn to provide innovative ideas, given a photograph, how to identify the personality characteristics and classify for pre-screening if they fit for the position.

### *To Do Task*

1. Extract the noticeable or required features for given a photograph and a job position.
2. Give a decision/suggestion from the noticeable features of the person in the photograph, fits for the position. Provide the details how the decision is made. Provide the confidence score of each class information.

Data:

Details of the data can be updated soon.

Mentor:

Dileep

## 7. Age of Online Profile

### *Overview*

Pollution of the social media networks is through creation of the fake profiles. With billions of online user, it is becoming harder and becoming essential to identify fake profiles. Several signs can be helpful in identifying that might scam the business.

### *Ideathon*

Brainstorm in team come up with ideas to identify the signs of the fake profile. You can refer to [page describing the fake profiles](http://smallbusiness.chron.com/spot-social-media-fake-46150.html) <http://smallbusiness.chron.com/spot-social-media-fake-46150.html> to start with.

Now it's your turn to provide innovative ideas to determine the features in spotting the profile genuinity.

### To Do Task

1. Analyse the online profile.
2. Extract the features of the profile required to determine if the profile is fake or real.

### **Data:**

No Data required..

Mentor:

Amjad

## 8. Online Network Monitoring System

### *Overview*

Network monitoring is use of a system that constantly monitors a computer network for slow, availing components and notifies the administrator either by emails, alarms or any other notifiable means. It defines the status of the servers, client system and the network connections.

### *Ideathon*

Brainstorm in team come up with ideas how to represent the servers and their connectivity status, test case fails or build error - linking with physical siren on failure of connectivity or Server going down.

### To Do Task

1. Graphical representation of the network.
2. Functionalities that are utilized to monitor the network.
3. Provide update of the network status, give priorities through thresholds and alarm based on severity.

### **Data:**

You can use the AWS machines to simulate the services

Mentor:

Mouli



## 9. Match a profile for its culture fit for a given company

### *Overview*

Just like a search engine, after recruiter's search the fit applicants can be ranked by using culture fitment in the company.

### *Ideathon*

Brainstorm in team to come up with ideas on how to match a candidate's profile with the Company and its culture. People are made of their past and exposure they have e.g. candidates who worked in certain company are natural fit for similar companies.

### To Do Task

1. Come up with a normalized score given a resume and company with the job requisition.
2. Should be able to rank for multiple candidate's profile

### **Data:**

10000 resume will be provided for this task

Mentor:

Bhargav

## 10. Video Sentiment Analysis

### *Overview*

Analysing videos is one of the fundamental problems of computer vision and multimedia analysis for decades. The task is very challenging as video is an information-intensive media with large variations and complexities. Thanks to the recent development of deep learning techniques, researchers in both computer vision and multimedia communities are now able to boost the performance of video analysis significantly and initiate new research directions to analyse video content.

### *Ideathon*

Brainstorm in team come up with ideas to perform sentiment analysis from a given interview video conducted by a Bot. You can refer interview calls that can happen (<https://www.youtube.com/watch?v=5ViHPxkHAEw>) and (<https://www.youtube.com/watch?v=n0dsOs9Xlh8> )

Now it's your turn to provide innovative ideas what features are required to do the sentiment analysis for qualifying the candidate.

### To Do Task

1. Convert the speech from video to text.
2. Perform sentiment analysis for the qualification of the candidate.

### **Data:**

Details of the data can be updated soon.

Mentor:

Manohar

# 11. Salary Negotiator

## Overview

Human robot interaction is fairly new and we are trying to make the robots more user friendly. If the robot can communicate the right things by using right cues, you will be able to interact with the robot in a very friendly and safely manner. Get an idea

<https://code.facebook.com/posts/1686672014972296/deal-or-no-deal-training-ai-bots-to-negotiate/>

## Ideathon

Brainstorm in team come up with ideas to that can interact with a human either in text or speech to negotiate salary with scale range given with the Human resource.

Now it's your turn to provide innovative ideas what questions can be generated and how the answers can be analysed to create such environment.

To do task:

1. Based on the input salary range given by the HR department, bot should be able to generate questions to ask the candidate.
2. Analyse the answers given by the candidate, and classify if the answer are correctly answered to question raised.
3. Intelligent bargaining system to benefit the candidate and the company together.

**Data:**

<https://data.bls.gov/search/query/results?cx=013738036195919377644%3A6ih0hfrgl50&q=Software>

Mentor:

Amjad

## 12. Self Accomplishment Tracker

### *Overview*

We have finite time in our life. It's very important for all of us learn new things and improve ourselves over the period of time. When we learn new aspects in our life we improve the quality of our life and also others by doing things in much better and improved way. A simple example would be that I want to learn and practice Yoga for daily 30 minutes or I want to learn swimming in next one month or I want to finish Head First Python in next 15 days.

Once we set a time bound goal for ourselves, there should be someone to keep up us not only reminded but also keep updated with my progress towards my goal.

### *Ideathon*

Brainstorm in team to come up with ideas to create a highly engaging mobile App where one can set the daily, weekly, monthly goals. It should remind and notify to the users about updating their progress on daily basis and also calculate the pace at which they need to work to accomplish their goals.

This App should also provide the relative rank based on progress and accomplishments among the people is close knit e.g. Colleagues and Family member.

### To Do Tasks:

1. Mobile App for setting the goals, reminding the progress, projecting required pace to accomplish the goal
2. This data should be stored on the cloud.
3. Another web interface which can show your relative rank in the company/college etc. based on progress made till that date. This can be shown on a big monitor.

Data:

Not required

Mentor:

Amjad

## 13. Video Interviewing tool

### *Overview*

Why should a recruiter make hundreds of calls every day to prospective candidates and at the end of the day, they felt like robots themselves. So, why not let the robot do the work and automate the task.

Why not a robot conduct an online (video or audio) interview of the candidate and respond appropriately.

### *Ideathon*

Brainstorm in team to come up with ideas to create a online Video interviewing tool which can talk to a candidate and provide the appropriate responses.

#### To Do Tasks:

1. On click of web link, the web page should be launched on the candidate's screen.
2. Bot's camera should record his video and audio
3. Based on the questions asked by the Bot, the candidate display expressions and respond back with answers for analysis.
4. Bot Avatar should also be asking preset questions related to the Job.
5. A report should be generated with the transcript at the end of the conversation

#### Extended use case:

1. Should be able to give out result of the conversation as positive or negative.

#### **Data:**

Not required.

#### Mentor:

Mouli

# 14. Optimum Salary Recommender System

## *Overview*

Asking for the right salary is one of the hardest problem we all face when we want to move to a new job. We keep comparing our salary with the people in the personal circle and sometimes are unsatisfied when we find ourselves for relatively less paid without realizing that what competencies we have or required to qualify for the higher salary. This can be one of the factors leading to lack of Job satisfaction and sub-optimal performance at Job.

So how do we know that the salary we are paid or seeking is just right and one can be satisfied with it.

## *Ideathon*

Brainstorm in team to come up with ideas on how to decide based on one's skill, expertise and exposure that the salary is just right for the person. Also at the same time it act as guide for the recruiting organization that this is the right salary to be paid to the candidate.

To Do Task:

1. From the metadata, should take the information of job title, work location, industry skill level, demand for the skill, educational qualification, previous experiences of the candidate, current employer pay scales and suggest

**Data:**

Work on public data such as <https://www.bls.gov/ooh/computer-and-information-technology/software-developers.htm>

Mentor:

Amjad

## 15. Telebot

### *Overview*

Recruiters interview many people to report the prospective candidates. The work is tedious and make them feel that they are robots. Instead why not the robot make the call to candidate and do the interview, letting telebot to automate the task of a recruiter.

A robot conduct an online audio interview of the candidate and respond appropriately.

### *Ideathon*

Brainstorm in team to come up with ideas to create a online audio interviewing tool which can talk to a candidate and provide the appropriate responses.

#### To Do Tasks:

1. Clicking a conference link, the candidate joins the Telebot interview call.
2. Candidate's audio should be recorded.
3. Based on the questions asked by the Telebot, the candidate can answer. Bot should identify whether the question is properly answered. If not answered correctly, question has to be reformatted and ask the question in another way.
4. Bot Avatar should also be asking preset questions related to the Job Description.
5. A report should be generated with the transcript at the end of the conversation.

#### Extended use case:

6. Should be able to give out result of the conversation as positive or negative.

#### **Data:**

Not required.

#### Mentor:

Dileep