SHUBHAM SINGHAL

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OBJECTIVE

Passionate Software Developer and Machine Learning enthusiast looking forward to be the part of innovative and fast-growing organization to contribute to its success and self-professional growth.

EDUCATION

Georgia Institute of Technology, Atlanta	**Graduating in May 2020**
Masters in Computer Science (MSCS) (Includes 1 year online)	3/4
Indian Institute of Information Technology, Allahabad, India	**June 2010 – July 2014**
Bachelor of Technology (B.Tech), Information Technology	9.27/10

WORK EXPERIENCE

Software Engineer @Booking.com, Amsterdam   **August 2018 to August 2019**

In Booking.com, I was a member of the Deals team where we launched campaigns around the year.

Deal of the Day

- Designed and implemented the algorithm to determine partners which would be eligible for the deal of the day program. The program provides them better ranking in search results on the particular day.
- Wrote an **oozie Job** in **pyspark** to process hotels on **Hadoop** clusters. Job would run every day and export the resultant partners to the SQL database to be processed by client-facing API's.

Campaign Microservice

- I, in the team of 2 back end developers and 1 front end developer implemented a service to create campaigns without the need of technical development for the future campaign launches.
- **Alerting and Monitoring** in addition to **A/B testing** were integral part of the service which would monitor the traffic and bookings, send alerts if booking gets cancelled or deal could not be booked.

Software Engineer @Microsoft India Development Center, India   **March 2017 to August 2018**

In Microsoft, I was part of the Mobile Data Labs (MDL). The MileIq is the app that captures trips (drives) and classifies them as Business or Personal. Business trips are eligible for tax benefits, hence the app is quite useful.

Drive Vicinity

- I researched, designed and implemented the algorithm to determine the regions where people drive the most. These are top locations suggested to users while adding missing drives.
- Wrote the Cron Job which would process the last 30 days drives backed up on **Azure Data warehouse**, determine the most visited location, push them to **Azure Blob** and exported to MSSQL.

Reporting Microservice

- I wrote new **microservice** to separate the reporting logic from various businesses in MDL. Microservice was deployed on Azure **Kubernetes** Service, as **Docker** Containers.
- Service was written in **Python 3, Django**. Reports were generated asynchronously using **Redis** queue and **celery** workers. **New relic** alerting was added to monitor health of the service.
- Separate environment was set up for automated **JMeter** Integration tests and **unit testing**. Code coverage was maintained above 80%.
- Later Integrated the service with expense services like XERO, which would help users to file the tax.

GDPR

- I wrote the service which will take the request to delete users' data from customer support team, crawl over entire MDL to delete user's profile. Delete request could also be withdrawn within 30 days.

Member of Technical Staff @Adobe Systems, India   **July 2014 to March 2017**

I worked on the product named Adobe Experience Manager Forms (AEM Forms) which is the platform to dynamically creating web forms and workflows.

2 way SSL

- Added the support for **2 way SSL** authentication in AEM application on web.

Adobe SignIn workflow
- Integrated Adobe Sign in the AEM workflow which will call Adobe Sign API's asynchronously to send the request to sign the document. This entire application was in **Java**.
- The workflow will poll the service periodically to check the status of the document. It will progress the workflow via callback if action has been taken by the user on the document requested to sign.

RESEARCH EXPERIENCE

Indian Institute of Technology, Bombay   **Jan 2014-June 2014**
Eye Tracking for Natural Language Processing.
- An algorithm to generate consensus scanpath (eye movements) out of multiple scanpaths using Bayesian Probability Reasoning and Hidden Markov Model was proposed.
- Such consensus scanpath help in identifying peculiar features of the text.

Indian Institute of Science, Bangalore   **May 2012-June 2012**
Analysis of eye gaze scanpath data.
- An algorithm was proposed to convert scanpaths into an undirected weighted graph by combining saccades to form edges and a cluster of fixations as nodes.
- Such consensus scanpath helps in determining correlation in different parts of the text given the context.

ACADEMIC PROJECTS

Segmentation of Cloud Images taken by Satellite   **Ongoing**
Thumbnail generation of digital image   **Ongoing**
Classification of Images using Artificial Neural Network   **Jan 2019 – May 2019**
Improving the efficiency of the Information Retrieval system.   **July 2013 – Dec 2013**
- Disambiguated the sense of the ambiguous word in a query by looking at the context in which it is used to retrieve the best relevant documents in the Information Retrieval System.

Eye Tracking on images   **July/2012 – Dec/2012**
- Ran eye tracking experiment on 5 subjects over 15 set of images in the lab. Later clustered fixations using dynamic K-mean clustering to determine salient features in particular set of images.

DECLARATION

I hereby declare that the information furnished above is true to the best of my knowledge. – Shubham Singhal