SHUBHAM SINGHAL
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EDUCATION

Indian Institute of Information Technology, Allahabad, India (IIITA) **June 2010 – July 2014**
Bachelor of Technology (B.Tech), Information Technology

- CGPA: 9.27/10.0

WORK EXPERIENCE

Software Engineer @Microsoft India Development Center **March 2017 to Present**
At Microsoft, I am working in Mobile Data Labs team (MileIq). It is an Android/IOS app which captures users' drives for tax saving and generates reports.

- Written a highly scalable, robust and fault tolerant microservice (named reporting microservice). It is written in Python 3, Django, Azure SQL Server. Used Redis queue as producer and celery as workers for asynchronous reports generation.
- Analyzed large dataset of drives to deduce the location where users drive most. Data is hosted on AWS Redshift, Once analyzed results are uploaded to S3 and migrated to Postgres.

Member of Technical Staff @Adobe Systems, India **July 2014 to March 2017**
In Adobe I was part of Adobe Experience Manager, Forms (AEM Forms) core team. It is the platform which let users maintain their content and assets, it provides a solution for building websites, mobile apps and forms. We used Java at Backend and CoralUI, JS at frontend.

- Providing mutual authentication (2 way SSL) based secure connection to clients.
- Optimizing database queries to retrieve results faster- pagination to improve the efficiency of the whole system and user experience.
- UI + backend to manage AEM forms watched folder.
- Created multiple workflow items which help businesses to automate their workflows
- Integrated Adobe Sign product with workflows in a multithreaded environment.

RESEARCH EXPERIENCE

Indian Institute of Technology, Bombay (IIT-B) **Jan 2014-June 2014**

- Eye Tracking for Natural Language Processing. Under the guidance of **Prof. Pushpak Bhattacharyya**
  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 (IISc, Bangalore) **May 2012-June 2012**

- Analysis of eye gaze scanpath data. Under the guidance of **Prof. C.E. Veni Madhavan**
  An algorithm was proposed to convert scanpaths into undirected weighted graph by combining saccades to form edges and clustering fixations as Areas of Interest (AOI) to form nodes. This scanpath helps to understand the correlation between different areas of the text.

ACADEMIC PROJECTS

- **Improving efficiency of Information Retrieval system using "Word Sense Disambiguation".** **July 2013 – Dec 2013**
  Disambiguated the sense of the ambiguous word in a query by looking the context in which it is used to retrieve the best relevant documents in Information Retrieval System.
- **Classification of Images using Artificial Neural Network in Distributed Environment.** **Jan 2013 – June 2013**
  Classified images using connectionist model ANN. For improving speed Hierarchical ANN was used in Distributed Environment and each ANN was parallelized.
- **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.

TECHNICAL SKILLS

Programming Languages: C, C++, Java, Python, PHP, MATLAB, JavaScript, HTML5, CSS.
Frameworks: Struts, Hibernate, Django, Flask.
Analytics Platforms: Amazon Redhsift, Azure Data Warehouse
Cloud Infrastructure: AWS, Azure