SHUBHAM SINGHAL

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EDUCATION

Columbia University   New York, NY
Master of Science in Computer Science   Dec 2018 (Expected)
Data Structures and Algorithms, Machine Learning, Big Data Analytics, Microservices & Apps

IIIT Delhi   Delhi, IN
Bachelor of Technology in Computer Science   May 2014

PROFESSIONAL EXPERIENCE

Samsung R&D India, *Software Engineer*   Jul 2014 – Jul 2017

Samsung Connect & Smart Home (iOS and Xamarin)
- Deployed device subscription to Samsung Smart Home Cloud to control smart home appliances
- Delivered prototype hybrid app for iOS and Android on Xamarin platform replicating the current app but eliminating individual native app development

Samsung Wireless Audio – MultiRoom App 2.5 (iOS)
- Shipped iOS app and implemented DLNA and UPnP protocols for wireless speakers allowing tether-free streaming from a wide range of online/offline music sources
- Implemented modules viz. in-app purchase integration, app ratings and feedback, iTunes Playlist Imports
- Decreased latency by detailed analysis on data flow between the speakers and content providers and designed Search and Indexing Service to support media search on thousands of music streams

Blu-Ray Disc Ripper *Software Development Intern* (Python)
- Developed Python based prototype tool to process high volume data and rip Blu-Ray clip for area of interest
- Reduced data transmission by approximately 70% by data inspection and modeling

PROJECTS

E-Commerce Platform – Microservices & Web Apps (AngularJS, Node.js, AWS)   Columbia University
- Designed and implemented Elastic Beanstalk microservices for ecommerce application integrating components viz. RESTful APIs/HATEOAS, SNS events and OAuth2
- Developed middleware with integrated Redis for supporting ETags and idempotency
- Worked on Neo4J as the graph DB platform to identify relationships between users and purchased/viewed products

Flight Delay Analysis and Prediction – Big Data Analytics (Flask, Pandas, sklearn)   Columbia University
- Performed data preprocessing and visualization to identify features vital for prediction of departure/arrival delays
- Developed multinomial logistic regression model to predict delays in upcoming flights with accuracy of 68.2%
- Designed and developed interactive web app to search for flights between cities, view delay history and predict delay status for the search query

Smartphone based Sensor Data Acquisition (C# and TouchDevelop)   IIIT Delhi
- Deployed Windows Phone app to collect data from on-device sensors and GPS services, which provided insight to human mobility and behavior
- App was part of research project aimed at studying behavior and patterns exhibited by people and performing predictive analytics to fine-tune the layout of services

Review and Recommendation System (Java, Weka, PHP, HTML)   IIIT Delhi
- Developed recommendation system to sort hotels of London based on key aspects which influence customer's decision-making while selecting a hotel
- Built JSoup based parsing tool for data extraction and cleansing to identify key facets from customer reviews
- Designed graphical representation to visualize customer sentiments based on extracted keys

Shake'm Up – Music Player (TouchDevelop)   IIIT Delhi
- Built Windows phone based music app on Microsoft Research's environment - TouchDevelop with features like song shuffle by curated accelerometer reading and player pause/resume by flipping over the device
- Over 20,000+ downloads in 2 months and has total downloads of approximately 32,000

SKILLS & INTERESTS

Programming Languages	Java, Python, AngularJS, Objective C
Tools and Technologies	AWS, Spark, sklearn, iOS, Git, Xamarin, TouchDevelop
Interests	Data Structures & Algorithms, Big Data, Application Development, Ubiquitous Computing

ACHIEVEMENTS

Idea For Innovation Award, Samsung R&D India, 2015