SUBHADEEP BHATTACHARYYA

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EDUCATION

Carnegie Mellon University **May 2018**
Master of Information System Management

Major Courses: ▪ Cloud Computing ▪ Internet Of Things ▪ Distributed Systems ▪ Web Development ▪ NoSQL DB ▪ Linux and OS

Kalinga Institute of Industrial Technology **May 2012**
Bachelor of Technology in Computer Science and Engineering GPA: 3.7

SKILLS SUMMARY

- **Languages:** Java, Android, JavaScript, Python
- **Cloud Platforms:** AWS, GCP, Azure, Heroku
- **Blockchain Frameworks:** Neo, Ethereum
- **Big Data Frameworks:** Kafka, Samza, Spark, Hadoop, Hive
- **Databases:** Oracle, MySQL, MongoDB, HBase, SQL Server, Redis
- **Tools:** Siebel CRM, JIRA, Kubernetes, Docker, Git, Bit-Bucket, SAS EM

CERTIFICATIONS

▪ OCA **(Oracle, 2015)** ▪ ITIL Foundation **(APMG, 2015)** ▪ Professional Scrum Master I **(Scrum.org, 2017)**

WORK EXPERIENCE

Carnegie Mellon University

Graduate Research Assistant, Institute Of Software Research **Pittsburgh, Pennsylvania, Jan 2018 – Present**
Advisor: Zack Coker, PhD Student, School of Computer Science

- Worked on the analysis of directive violations in the Android framework. Built scraping applications for GitHub and Stack overflow to identify practical cases of state-based directive violations. Working on building a tool to automatically fix state-based directive violations.

Web Developer, Heinz College **Pittsburgh, Pennsylvania, May 2017 – Present**

- Re-engineered the admissions department CRM email campaign by converting non-responsive messages to responsive messages so as to improve mobile user experience.

Tata Consultancy Services

Full Stack Software Engineer **Mumbai, India and Riyadh, Saudi Arabia, Sep 2013 – April 2017**

- Accomplished the bifurcation of an enterprise Siebel CRM application for B2B and B2C customers to improve application throughput and total uptime. Led the seamless migration of 3 million production records using PL/SQL procedures and server-side shell scripts. Deployed and developed numerous Siebel CRM objects as a part of product migration. Developed server side process optimizations through shell scripts and cron jobs. Streamlined business process flow by analysing production defects and fixing redundancies in the Lead Management and Home Business Unit functionality so as to reduce revenue loss. Led the war-room defect resolution for fingerprint authentication implementation across Kingdom of Saudi Arabia so as to reduce production bugs by 5 %.
- Single-handedly developed the web-based crop procurement module of a cross-platform application named **mKRISHI** – a TCS project aimed at digitalizing agriculture in rural parts of India.

KEY ACADEMIC PROJECTS

Blockchain Prototype Implementation, Carnegie Mellon University **Spring 2018**

- Currently working the prototype delivery of a peer-to-peer Blockchain implementation on NEO/Ethereum for a start-up which plans to implement its own currency for global recruitment services.

Real Time Lyft/Uber like Cab Matching Service, Carnegie Mellon University **Fall 2017**

- Processed multiple streams of GPS data relayed through Apache Kafka producers, using Apache Samza consumers to enable a driver matching service like Uber/Lyft. Deployed the Kafka and Samza stream on the YARN provisioned on AWS EMR.

High Performance Twitter web-service, Carnegie Mellon University **Fall 2017**

- Developed a high-performance web-service deployed on Undertow to handle queries on 1 TB of raw Twitter data. Performed ETL for data filtering using Hadoop Map-Reduce (Batch Processing) provisioned on AWS EMR to load the data in SQL Server and HBase. Used query optimization techniques such as indexing, thread-pooling and sharding on SQL server and region-split, hashing on HBase, to serve 10K RPS for each web service.

Social Network Backend Implementation, Carnegie Mellon University **Fall 2017**

- Used My SQL on AWS RDS to store user id, password and implemented a web-service on AWS EC2 to replicate the login process. Used HBase over AWS EMR clusters to store friends data for users. Used Mongo DB to store 16 GB timeline data including status updates and developed a web-service to display friends, their status updates, conversations on successful login.

Input Text Predictor using Hadoop Map-Reduce, Carnegie Mellon University **Fall 2017**

- Implemented a batch-processing Map-Reduce solution to pre-process 10 GB of data using AWS EMR clusters. Used the cleaned data for input text prediction through n-gram modelling. Finally performed caching using Redis to improve application throughput.

Iterative Data Processing using Spark, Carnegie Mellon University **Fall 2017**

- Used Apache Spark over AWS EMR clusters to iteratively process 10 GB of raw Twitter data to generate follower and followee count. Replicated the PageRank algorithm on the data to generate user influence.

LEADERSHIP AND AWARDS

- Mentored the first women's IT team in Saudi Arabia on the deployment of Siebel objects in production. **2017**
- Best performer award for all-round work during B2B application cutover and delivery. **2017**
- Client appreciation award for performance in support of B2C application. **2016**