

SUBHADEEP BHATTACHARYYA

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EDUCATION

Carnegie Mellon University

▪ Master of Information System Management; (3.85)

Major Courses: ▪ Cloud Computing ▪ Internet Of Things ▪ Distributed Systems ▪ Object Oriented Java ▪ NoSQL DB ▪ Agile Methods

Pittsburgh, PA

May 2018

Kalinga Institute of Industrial Technology

▪ Bachelor of Technology in Computer Science and Engineering; (3.7)

Odisha, India

May 2012

SKILLS SUMMARY

▪ **Languages:** Java, JavaScript, Python

▪ **Cloud Platforms:** AWS, Azure, Heroku

▪ **Frameworks:** J2EE, Spring, JUnit, jQuery, iBATIS, React

▪ **Big Data Tools:** Kafka, Samza, Spark, Hadoop, Mosquitto

▪ **Databases:** Oracle, MySQL, MongoDB, HBase, SQL Server

▪ **Tools:** Siebel, Kubernetes, Docker, Git, Maven, Jenkins, Chef, Linux

CERTIFICATIONS

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

WORK EXPERIENCE

Blockchain Application Developer(Echolink Tech.), Carnegie Mellon University

Pittsburgh, Jan 2018 – May 2018

▪ Worked with a C-level executive on a recruitment services blockchain to create a secure trusted data feed infrastructure using LinkedIn as data source.

Graduate Research Assistant, Institute Of Software Research, Carnegie Mellon University

Pittsburgh, Jan 2018 – May 2018

▪ Worked on the analysis of directive violations in Android by accessing GitHub's REST API to identify repositories and code of undocumented issues.

Web Developer, Heinz College, Carnegie Mellon University

Pittsburgh, May 2017 – May 2018

▪ Re-engineered the admission department's CRM email campaign by developing responsive messages to improve mobile user experience by 30%.

Senior Software Engineer, Tata Consultancy Services

Mumbai, India & Riyadh, Saudi Arabia, Sep 2013 – Apr 2017

▪ Gained first-hand experience of implementation, support and maintenance of large-scale IT applications through 2 years of client-site experience.

▪ Worked on the bifurcation of an enterprise Siebel CRM application catering to 17 million B2B and B2C customers, for the largest telecom client of TCS. Improved application throughput by 15% and increased total uptime as a by-product of the change.

▪ Led the seamless migration of 3 million production records between Oracle databases using PL/SQL procedures and server-side shell scripts.

▪ Developed server side process optimizations and automated database clean-up's through cron jobs to improve data quality and query performance.

▪ Streamlined business process flow by fixing client/server side production defects in the Lead Management, Fingerprint authentication module.

▪ Worked on production data-fixes using multi-threaded Siebel EIM tools and Oracle procedures to reduce deployment time by 10%.

Software Engineer, Tata Consultancy Services (Innovation Labs – R & D)

Mumbai, India, Sep 2012 – Sep 2013

▪ Single-handedly developed the procurement module of a cross-platform application - **mKRISHI**, aimed at facilitating agriculture in rural parts of India.

▪ Used Struts 2.0 as the front-end framework, Spring 3.0 for Inversion of Control and dependency injection, Ibatis for ORM with SQL.

KEY ACADEMIC PROJECTS

High Performance Twitter Analytics Web-Service (AWS, Java, Map Reduce, MySQL, HBase, Multi-threading)

CMU

▪ Developed a high-performance multi-threaded RESTful web-service to handle concurrent read/write queries on 1 TB of raw JSON Twitter source data. Established the ETL pipeline for data filtering using Map-Reduce to load the data in SQL Server and HBase. Used query optimization techniques such as indexing, thread-pooling, sharding, hashing to serve more than 10K RPS for each web service.

Cloud-based Distributed Key-Value Store (Multi-threading, Java, Distributed Systems, AWS EC2)

CMU

▪ Developed a key-value storage system on AWS that supports strong and eventual data consistency models. Used replication and sharding to enable data-redundancy and allow greater number of parallel accesses.

Real-time Taxi Driver Matching Service (AWS EMR, Apache Kafka, Apache Samza)

CMU

▪ Published multiple streams of GPS data through Kafka producers. Used Apache Samza consumers to process the data to enable a driver matching service like Uber/Lyft. Deployed the Kafka and Samza application on the YARN provisioned on AWS EMR.

Social Networking Time with Heterogenous Backend (MySQL, HBase, MongoDB, AWS EC2)

CMU

▪ Integrated My SQL on AWS RDS and Mongo DB with a Java web-service to store 16 GB user and timeline data to replicate the login process, display friends, status updates and user comments. Implemented a friend recommendation system using follower, followee data extracted from HBase.

Geographical Analysis of Crime using 2D Trees (Data Structures, Encryption, Distributed Systems)

CMU

▪ Implemented user authentication based on symmetric/asymmetric-key encryption algorithms. Implemented 2D tree for logarithmic lookup of all crimes committed in a given area. Integrated the result with Google Earth for intuitive visualization.

Blockchain Implementation using Web Services (Digital Signatures, SOAP, JAX-WS, REST, Distributed Systems)

CMU

▪ Implemented a stand-alone blockchain API and remote clients for accessing them using SOAP, JAX-WS and REST web-service protocols. Facilitated the signing the blockchain transactions using digital signatures and stored proof of concept and hash of previous block.

Intrusion Detection using Particle Photon (Internet of Things, Particle Photon, PIR Sensors, Mosquitto, SMTP)

CMU

▪ Implemented an intrusion detection system using Passive Infrared sensors, which published the digital signals to a Mosquitto message queue using Particle Photon. Integrated the system with a Mosquitto web-client to poll messages from the queue and send emails based on signal frequency.

LEADERSHIP, AWARDS AND INTERESTS

▪ Mentored the **first women's IT team in Saudi Arabia** on the deployment of Siebel objects in production and SQL basics.

▪ Best performer award for all-round work during OSS application bifurcation cutover and delivery.

▪ Writer at **Quora(Subhadeep-Bhattacharyya-1)**, **Stack Overflow(radioactive)**. Sports Enthusiast with keen interests in Cricket.

2017

2017