

SHAGUN BHATIA

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EDUCATION

University of Southern California

August 2019 - May 2021

MS in Computer Science; Courses: Foundations of Artificial Intelligence (CSCI-561), Analysis of Algorithms (CSCI-570)

Sri Jayachamarajendra College of Engineering

September 2012 - May 2016

B.E in Information Science and Engineering (3.6/4.0)

TECHNICAL SKILLS

Languages:	Java, Python, Shell, Powershell, C, C++
Databases:	My-SQL, Sqlite, Berkeley DB
Version Control Tools:	Git, Perforce
Frameworks:	Jenkins, Microsoft Azure, Ipython, Address Sanitizer, Lcov, Docker, Valgrind, Hadoop, Hive

WORK EXPERIENCE

Dev Nights USC, Los Angeles, California

• Blockchain Developer, Oct 2019 - Present

Vote on Chain

- Designed and implemented voting on blockchain by building Solidity contracts and deploying them over ethereum testnet while maintaining the transactions in realtime database simultaneously. [USC Dev Nights](#)

InMobi Technologies, Bengaluru, India

• Software Development Engineer, February 2018 - May 2019

InMobi Analytics

- Contributed to design and development of real time analytics of third party logs deployed over Microsoft Azure Kusto.
- Implemented cost optimisation of InMobi Analytics by designing and developing programmatic activation and deactivation of Kusto cluster and reducing its **uptime by 98%**.
- Developed Powershell scripts and Azure Resource Manager (ARM) templates through which entire provisioning of resources and deployment on Azure was automated. Enhanced provisioning process **by 85% in terms of deployment time and effort**.
- Catalogued ingested data and improved query performance by designing and developing daily and weekly roll-up tables.

Ad Segmentation

- Added support for **15+ new Ad segments** from UI by contributing to DSL (Domain Specific Language) to SQL transformation module.
- Built a framework for microservices automation using Pytest from scratch as part of which **400+ test cases were automated**. Detailed HTML test reports were hosted over Jenkins.
- Assisted in development and integration of InMobi Ad Segmentation Rest APIs through java springboot framework.
- Implemented **Role Based Access Control (RBAC)** by creating permissions for System Integrator role for microservices exposed to customer data platform.

Akamai Technologies, Bengaluru, India

• Software Development Engineer in Test, July 2016 - February 2018

Beacon Server

- Lead functional testing and bug verification of multi-threaded processing servers that processed upto **5.4M log lines/hour**
- Developed Beacon Server performance testing suite to monitor throughput, CPU usage, Load Average, Resident/Virtual memory usage, CPU utilization along with the plot of stats upon processing 1.5k log lines/sec.

Automation Suites

- Increased test efficiency by developing over 20+ regression and performance testing automation suites using Pytest that **reduced 72 man hours effort to 2 hours**.

Address Sanitization and Code Coverage

- Performed Address Sanitization on Beacon Server source code using Googles ASan tool and reported memory leaks and memory corruption. This was followed by code coverage using LCOV where testcases were added to regression suite to improve the overall **code coverage by 75%**.

PROJECTS

Online Article Popularity Prediction: Executed a total of 13 Machine Learning models to explore how the content of the article and external factors influence its popularity in terms of share count. **Accuracy: 88.8% with Random Forest Regression.** [Published in CCIP-2016.](#)

Prediction of Cache Hits on Distributed System: Executed Random Forest Classifier and K-Means Clustering algorithms on Akamai server logs to predict cache misses on distributed servers. Accuracy: 75% and 60% respectively.

Recommendation engine for InMobi Glance users: Developed a recommendation engine for predicting most suitable Glance articles to the users based on their past behaviour and articles meta data using collaborative filtering model. Accuracy: 35%