ANIRUDDHA THAKSEN PARVAT

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EDUCATION

Master of Science, Computer Science and Engineering, University at Buffalo 2021 - 2023

Bachelor of Engineering (Computer), Savitribai Phule Pune University 2013 - 2017

SKILLS

Languages	Java, Python, JavaScript, HTML, CSS
Frameworks and libraries	Spring ecosystem, Hibernate, Pandas, Plotly, Streamlit, Keras
Databases	Apache Cassandra, MySql, Hazelcast
Technology	Git, Docker, Apache Kafka, ActiveMQ, Oracle WebLogic, AWS, Linux, gRPC

EXPERIENCE

Senior Engineer July 2017 - July 2021
Mindtree *Bengaluru, India*

- Developed RESTful APIs and event driven systems using Java, Cassandra, Kafka and Spring. Assumed ownership of three modules, encompassing the full development cycle, implementing user stories, enhancing functionality, testing, and fixing defects.
- Led performance improvement initiatives, resulting in a 60% increase in message processing throughput through a combination of production data analysis, efficient caching implementation, Cassandra tuning, code optimization, and JVM tuning.
- Contributed to the migration of a large JavaEE monolith application to a microservices architecture, focusing on the successful migration of three specific modules, technology evaluations and creating proof of concepts.
- Developed internal developer tools for automated local testing. The testcases can be quickly defined in text files and shared. It helped during a rewrite to ensure faster development by catching defects early.
- Implemented Prometheus based monitoring for the whole application with custom JMX and Prometheus exporters. Created a dashboard using Streamlit for loadtest monitoring.
- Implemented wrapper for Log4J, producers and consumers of Apache ActiveMQ, Kafka and Weblogic JMS to add contextual logging and tractability through multiple applications.

PROJECTS

Message Broker: ToyMB, a message broker that supports persistent messages with subscriber groups and topic partitions with high consistency. It uses Raft consensus protocol for managing metadata and topic messages. New servers can be added or removed quickly from the cluster with automated server replacement which makes the cluster highly fault tolerant. It uses gRPC for transport layer. (Github)

VizierDB Editor Support: VizierDB is a kernel-free notebook. Devised a way to switch between local editor and web UI seamlessly. Created a local agent that does code sync. Created a stub server that collects local stubs on the VizierDB server, this helps lint the code on the users local machine even if a package is not installed on their local. (Github)

Flight Delay Prediction: Domestic flight performance data from U.S. Department of Transportation's (DOT) Bureau of Transportation Statistics combined with weather scraped from 'www.wunderground.com' and airport data scraped from Wikipedia. Date features like holiday, weekends, day of the week were extracted from flight date. Last 30 days of data was considered as test data. Final Random Forest model had 90% accuracy on the test data.

Network Intrusion Detection System: Final year bachelors project. Network intrusion detection system using ensemble of binary deep learning classifiers. Two staged NIDS evaluated. 81.37% accuracy on test set. Published 2 papers as a result of this project. (Github) (Google Scholar)