

DHRUV PATEL

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LinkedIn

GitHub

EDUCATION

San Jose State University, M.S., in Software Engineering

Coursework: Enterprise Software Platforms, Machine Learning, Cloud Technologies.

Sept 2022 – May 2024

California, United States

Gujarat Technological University, B.E., in Information Technology

Coursework: Data Structures, Algorithms, Operating Systems.

May 2016 – July 2020

Gujarat, India

WORK EXPERIENCE

MarketAxess Holdings Inc.

Software Engineer Intern

May 2023 – Aug 2023

New York City, United States

- Led a 7-member intern team in implementing real-time notification services for trading workstation using AWS API Gateway with WebSockets API, achieving **sub-20ms latency** for dealer price releases, resulting in improved client engagement.
- Built a Slack bot utilizing data from Bitbucket commits, JIRA tickets, and Confluence authors, stored as vectors in ChromaDb, integrating semantic search with GPT-3, aiming to **boost employee engagement by 75%** and foster cross-team collaboration.
- Revamped logging infrastructure, configuring Logstash for log aggregation and Elasticsearch for storage, resulting in **50% faster retrieval time** and improved operational agility through instant telemetry access with Kibana dashboards.
- Integrated trade ticket feature into trading platform UI using React, Redux and AG Grid, fetching data from Kafka topics, streamlining monitoring and tracking of **400K+ executed trades quarterly by 2000+ clients**, amplifying user experience.

Tata Consultancy Services Ltd. (TCS).

Software Development Engineer

Jul 2020 – Aug 2022

Maharashtra, India

- Collaborated on development of document parsing workflow, employing Computer Vision APIs, business rule engine, and ML for categorizing financial documents obtaining **98% accuracy**, expediting process and reducing **manual review time by 50%**.
- Designed and developed caching mechanisms to optimize storage of read-intensive, business rules from NoSql DB, strategically leveraging Redis cache, **resulting in 20% decrease in processing time** and elevated application responsiveness.
- Empowered business users through React app for rule engine management, created Kubernetes microservices with 20+ RESTful APIs in Spring Boot framework, trimming down rule modification time by 60%, **hitting 90% user adoption in 3 months**, and 80% decrease in developer involvement.
- Architected and deployed Java Spring Boot-based microservices blueprint by encapsulating configurations into **reusable Docker components**, empowering teams to effortlessly spin off services, improving development timelines by 30%.
- Initiated incorporation of event driven alerting solution with EventBridge, AWS SNS and Java based lambda functions to notify production support team, facilitating **resolution of defects within 30 minutes** leading to 45% reduction in downtime.
- Performed tabular field extraction from **10000+ price sheet documents** using AWS Textract, by creating FastAPI-based dockerized API generating real-time inference, securing the API with role-based control using AWS Cognito.

(n) Code Solutions.

Software Developer

Jan 2019 – May 2019

Gujarat, India

- Realized **25% reduction in monthly cloud expenses** by transitioning to cost optimizing solutions, leveraging JVM thread tuning, concurrent programming, auto scaling, which collectively increased utilization from 30% to over 80%.
- Co-Engineered scalable microservices-based Java backend system initially capable of handling 300 rps, through horizontal scaling with NGINX load balancer, scaling to **900 rps, marking 200% performance increase**.
- Implemented 50+ unit and integration test cases with Junit and Mockito, **increasing code coverage from 65% to 95%**, alongside conducting performance tests with Apache JMeter under varying load conditions ensuring system stability, boosting service efficiency by 15%.

PROJECTS

LinkedIn Clone | Java Spring Boot, React, REST, MongoDB, GKE, Terraform.

- Developed a scalable **3-tier web application** with LinkedIn-like functionalities, which involved writing backend REST API calls in Spring Boot and creating responsive frontend components in React for page handling.
- Deployed application to Google Kubernetes Engine ensuring 99.99% uptime, provisioned metric collection, alerting and monitoring on Prometheus in conjunction with Google Cloud Logging for custom log collection.
- Accelerated infrastructure provisioning by employing Terraform, resulting in automated deployment of architectural components, **reducing setup time by 30%**.

Review Hub | Node, React, MySQL pooling, Redux, Mocha, JMeter, Kafka, AWS, Docker.

- Created website to crowd-source reviews about business with React, Node.js, and AWS RDS, with integration of Okta's Single Sign-On (SSO) for enhanced security and user login convenience.
- Incorporated Redux for state management, JMeter, Mocha testing for backend, Enzyme testing for frontend, **enabled 20000 concurrent users** with AWS deployment along Docker and Kafka integration.
- Improved **database performance by 25%** through MySQL connection pooling, facilitating multi-threaded connection reuse.

TECHNICAL SKILLS

Programming: Python, Java, C#, JavaScript, Shell Scripting.

Technologies: Azure, AWS, Blockchain, Java Spring Boot, React, Node.js, .Net Core, Docker, Kubernetes, Git, GraphQL.

Databases: Microsoft SQL Server, MySQL, MongoDB, AWS DynamoDB, Azure CosmosDB.