Sumit Rodrigues

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EDUCATION

California State University, Fullerton — Fullerton, CA
Master of Science, Computer Science (GPA 3.8/4.0) — *August 2023 - December 2025*
Relevant Courses: Advanced Algorithms, Advanced Blockchain , Cloud Computing, Advanced Database Systems

University of Mumbai — Mumbai, IN
Bachelor of Engineering, Computer Science (GPA 3.25/4.0) — *August 2017 - May 2021*
Relevant Courses: Operating Systems, Artificial Intelligence, Data structures, Object-oriented programming

WORK EXPERIENCE

Software Engineer Student Assistant — August 2023 – Present
California State University - College of Communication — *Fullerton, CA*
- Created **full-stack applications** using **Java and Spring Boot,** enhancing system scalability and responsiveness, resulting in faster data processing and a smoother user experience
- Developed and deployed **microservices-based APIs** using **Java Spring Boot**, reducing latency by **25%** and ensuring seamless integration with department systems
- Utilized **CompletableFuture** and **asynchronous non-blocking I/O** to improve the responsiveness of data-heavy operations

Software Engineer — September 2021 – July 2023
BNP Paribas (Bank of the West & BMO) — *Mumbai, IN*
- Led development of **back-end** features for **fintech** applications including **KYC Scoring** and **Self-Service Tool** using **Java, Spring Boot and RESTful APIs**, reducing average page load times for **1M+ users**
- Developed backend **microservices** using **Spring Boot**, employing **Java Executor Service** and **parallel processing pipelines** to enhance request handling throughput by 40%
- Designed **multi-threaded backend services**, utilizing **Java concurrency** utilities thread pools, improving request processing time by **70%**
- Built scalable **ETL pipelines** using **Java and MySQL on AWS**, optimizing data ingestion workflows and ensuring seamless integration with enterprise systems using **S3 and Lambda** for enhanced efficiency
- Implemented **Spring Security with OAuth2 for secure authentication and RBAC** for authentication and authorization, enhancing overall system security and aligning with banking regulatory requirements

Software Engineer Intern — May 2020 – July 2020
TechHighway Systems Pvt. Ltd. — *Pune, IN*
- Built a high-performance **e-commerce storefront** using **Java and Spring Boot**, hosted on **AWS EC2**, leading to a **20%** increase in conversion rates due to improved user experience
- Integrated **Spring Security** with **JWT-based authentication**, ensuring secure user sessions and protecting sensitive transaction data
- Conducted **unit testing** using **JUnit** and **integration testing** with **Postman** to validate API correctness under different load conditions, improving application stability before production deployment

PROJECTS

Inventory Prediction System | *Python, Machine Learning, SQL, VueJS, Nest.js, AWS* — May 2024 – July 2024
- Engineered an **AI-powered** Inventory Prediction System using **XGBoost, Pandas, and Scikit-learn**, integrating a secure **MySQL** database, **NestJS** back-end APIs, and a **Vue.js** front-end, resulting in a **35%** reduction in fleet costs, **20%** fewer stockouts, and improved inventory management across retail stores

Airline Performance and Flight Delay Analysis | *Java, Python, Kubernetes, Spark, Cassandra* — January 2024 – May 2024
- Designed and deployed a **scalable data pipeline** using **Apache Spark** for distributed processing and **Cassandra** for storage. Orchestrated with **Kubernetes, Minikube, and Docker**, the solution enabled the efficient analysis of large **.Parquet** datasets for flight delay insights, reducing processing time by **50%**

Algorithm Efficiency Analyzer Tool | *Python, Django, Streamlit, Algorithms* — January 2024 – May 2024
- Developed a Sorting Algorithm data structures Visualizer in **Python using Django**, supporting multiple sorting algorithms (e.g., Bubble Sort, Quick Sort, Merge Sort) with customizable plot parameters and real-time visualization through bar charts
- Implemented features for **user-defined or randomly generated arrays**, displaying **execution times, median of the sorted array, and the kth smallest element**, enhancing the user experience and educational value of the tool

SKILLS

Languages and Frameworks: Java, Python, C++, JavaScript, TypeScript, Spring Boot, React.js, Node.js, Nest.js, MongoDB, React Native, Redux, Tailwind CSS, SQL, MySQL, Selenium(Maven).
DevOps and CI/CD Tools: Hadoop, Apache Spark, Cassandra, Kubernetes, Docker, Git, Linux, Jenkins.
Cloud Technologies: Azure, Google Cloud, AWS (Sagemaker, EC2, Lambda, S3).
Software and Tools: JIRA, Confluence, Vite, Webpack, Storybook, Postman, GitHub, Bitbucket, Google Analytics.
Certifications: Oracle Cloud Infrastructure Generative AI Professional