ROHIT PARTHIBAN

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SUMMARY

Result-driven Software Engineer with a strong focus on building and optimizing high-availability, fault-tolerant systems. Skilled in Java, Python, and JavaScript, as well as concurrency optimizations and microservices using Spring Boot. Adept at leveraging RESTful APIs and AWS to create scalable, maintainable solutions. Passionate about delivering high-quality, maintainable code and collaborating with teams to solve complex technical challenges.

EDUCATION

Master of Science in Computer Science and Engineering **Jun 2025**
Santa Clara University, Santa Clara, CA, USA, CGPA: 3.732
Coursework: Computer Architecture, Design Analysis and Algorithm, Object-Oriented Analysis, Design and Programming Advanced Operating Systems, Computer Networks, Distributed Systems and Machine Learning.

Bachelor of Technology in Information Technology **Apr 2023**
Anna University, Chennai, TN, India, CGPA: 3.7

TECHNICAL SKILLS

Programming Languages: Java, JavaScript, Python, C, C++, HTML, CSS
Databases: MySQL, Oracle, Snowflake, MongoDB
Frameworks & Tools: Git, GitHub, Spring Boot, Node.js, Flask, React.js, IBM Kubernetes, JavaFX
Cloud Platforms: Amazon Web Services, Azure, IBM Cloud

PROFESSIONAL EXPERIENCE

Application Developer Intern, Ecopez Technologies Private Limited **May 2023 – Aug 2023**
- Collaborated with Product Leaders to design and develop a software application for School talks, enhancing user interaction and engagement.
- Coordinated with the development team to build a school student community application, resulting in a 50% increase in user engagement.
- Leveraged Java, JavaScript, HTML, and CSS to enhance application efficiency and optimize the user experience.

Backend Application Developer Intern, Arihant Gyp Ply And Lam **Aug 2021 – Dec 2021**
- Developed services to support the sales memo use case and deployed the application in Amazon Elastic Cloud instances, resulting in a 75% improvement in system reliability and performance.
- Scaled the service in AWS through Auto Scaling and Load Balancing, handling increased traffic and ensuring seamless performance.
- Utilized HTML, CSS, Java, and JavaScript to enhance application performance and user experience.

ACADEMIC PROJECTS

RAG System for Email Queries **Sep 2024 - Dec 2024**
- Implemented an advanced Retrieval-Augmented Generation (RAG) pipeline with ChromaDB for context-rich email query handling.
- Boosted domain-specific accuracy by 25% through fine-tuning a Gemma LLM with LoRA using Databricks Dolly datasets.
- Streamlined email data retrieval by integrating Google Takeout parsing and vector embeddings.
- Orchestrated multi-step AI workflows with LangChain, significantly reducing manual oversight.
- Leveraged Python, LangChain, ChromaDB, LoRA, GPT4All, and llama.cpp for robust development and deployment.

Real-Time Sports Score Updates **Apr 2024 – June 2024**
- Collaborated with a cross-functional Agile team to develop a distributed publish-subscribe system in Spring Boot, achieving real-time sports score updates with sub-second latency.
- Implemented a fault-tolerant leader election mechanism that cut recovery time by 40% during broker failures.
- Ensured data consistency across brokers through logical clocks, maintaining 99% message reliability under concurrent loads.
- Scaled horizontally to handle a 30% increase in simultaneous publisher-subscriber traffic with no performance degradation.
- Utilized Spring Boot, RESTful APIs, Java concurrency, and distributed system algorithms for robust, efficient deployments.

Automated Simulation Garden **Apr 2024 – June 2024**
- Led a collaborative Agile team to develop an interactive garden simulation in Java and JavaFX, featuring a responsive UI layout for enhanced visualization.
- Ensured robust object-oriented design to deliver realistic ecosystem interactions, integrating dynamic weather simulation and advanced pest control algorithms.
- Improved system reliability by 90% and achieved real-time responsiveness through comprehensive testing and concurrency optimizations.
- Demonstrated expertise in high-availability application development, maintaining 24-hour crash-free performance under production-like loads.