VAMSI MAKKE

Email | +1 (513) 537-2384 | Portfolio | LinkedIn | GitHub | LeetCode | Cincinnati, OH

OBJECTIVE

Software Engineer with M.S. in Information Technology (GPA 4.0) and strong foundation in **Java, Python, C++, JavaScript**. Proven through **1300+ LeetCode problems solved (top 7% globally)** and hands-on experience building distributed systems, full-stack web applications, and ML-powered features. Seeking to design, build, and scale innovative products across web and cloud platforms that impact millions of users.

EDUCATION

Master of Science in Information Technology <div align="right">Jan 2024 – May 2025</div>
University of Cincinnati <div align="right">GPA: **4.0/4.0**</div>
Relevant Coursework: Cloud & Storage Systems, Principles of Cybersecurity, Advanced Algorithms, Software Engineering, Machine Learning, Natural Language Processing.

Bachelor of Technology in Computer Science & Engineering <div align="right">Sep 2019 – Apr 2023</div>
Vasireddy Venkatadri Institute of Technology
Relevant Coursework: DBMS, Advanced Operating Systems, Distributed Systems, Linux System Programming.

SKILLS

Programming Languages	Java, Python, C++, JavaScript, Bash, SQL
Web	React.js, Node.js, Express.js, RESTful APIs, HTML/CSS
Machine Learning	TensorFlow, scikit-learn, NLP, Model Deployment
Systems & Cloud	Distributed Systems, Microservices, Unix/Linux, AWS, GCP, Azure
Databases	MySQL, PostgreSQL, MongoDB, Redis
DevOps & Tools	Docker, Kubernetes, Kafka, GitHub Actions, Git, CI/CD
Other	Data Structures & Algorithms, Security Development, Accessible Design

EXPERIENCE

Software Engineering Intern <div align="right">Jun 2025 – Present</div>
TORQ Sports <div align="right">*Woodland Hills, CA*</div>

- Designed a ranked, cursor-based home feed using engagement signals, **increasing user activity 50%**.
- Architected feed system to scale horizontally for **100K+ concurrent users** with sub-200ms latency.
- Optimized multi-stage SQL queries and compound indexing to **reduce query time 55%** and raise throughput.
- Implemented input validation, OAuth 2.0, and rate limiting to **lower API security risk 65%**.
- Added WCAG 2.1 AA-compliant keyboard navigation and ARIA labels to improve accessibility.

Software Engineer Intern <div align="right">Apr 2024 – Apr 2025</div>
NERDS, University of Cincinnati <div align="right">*Cincinnati, OH*</div>

- Built Spring Boot and Python REST APIs with async processing to **reduce SQL transfer time 30%**.
- Integrated Kafka for event-driven workflows and Redis caching to **improve API response 40%**.
- Deployed containerized microservices on AWS EC2 with auto-scaling to **increase availability 70%**.
- Automated CI/CD pipelines with Docker and GitHub Actions to **cut deployment time 60%**.
- Profiled application performance using Linux tools (perf, strace, top) to identify bottlenecks.

Software Engineer Intern <div align="right">Dec 2022 – Dec 2023</div>
Cognizant Technology Solutions <div align="right">*Hyderabad, India*</div>

- Delivered full-stack features (Spring Boot, React, MySQL) to **increase user engagement 30%**.
- Tuned SQL joins, indexes, and query plans to **reduce query execution time 35%**.

- Built Python admin tools with monitoring dashboards to **improve database observability 45%**.
- Wrote Bash scripts for automated log analysis and system health monitoring in production Linux environments.

PROJECTS

E-Wallet API *Spring Boot, Redis, Kafka, MySQL, Docker*

- Built microservices for real-time transfers with idempotency, retries, and DLQs to **scale throughput 40%**.
- Designed database sharding strategy to support **10M+ user accounts** with consistent hashing.
- Integrated Kafka for async workflows and Redis caching to **cut end-to-end latency 30%**.
- Hardened APIs with OAuth 2.0, input validation, and observability (Prometheus metrics) for production reliability.

ML-Powered Sentiment Analyzer *Python, TensorFlow, scikit-learn, Flask*

- Built NLP model using LSTM networks to classify sentiment on **150K+ tweets with 91% accuracy**.
- Deployed Flask REST API for real-time inference with **sub-50ms p99 latency** using model quantization.
- Processed and cleaned text data using NLTK; applied TF-IDF and word embeddings for feature extraction.
- Containerized with Docker and deployed on AWS EC2 for scalable inference.

Social Media App *MERN Stack, Python (load testing)*

- Load-tested and tuned API handlers using Locust, **reducing p95 response time 40%** under 5K concurrent users.
- Optimized MongoDB schema with compound indexes to **improve query efficiency 35%**.
- Implemented JWT-based authentication, rate-limiting, and CSRF protection to secure critical endpoints.
- Added screen reader support and keyboard navigation for improved accessibility.

User-Rental Management Web App *Spring Boot, React.js, MySQL, Docker*

- Built full-stack web application for equipment rental with responsive UI using React and Material-UI components.
- Designed RESTful APIs and booking workflows to **reduce booking completion time 20%**.
- Implemented role-based access control (RBAC) and session management for secure multi-tenant operations.
- Automated containerized deployments with GitHub Actions to **cut setup time 50%**.

ACHIEVEMENTS

- **LeetCode**: Solved **1300+ problems (Top 7% globally)**; 1800+ contest rating; specialized in graphs, dynamic programming, trees, and greedy algorithms.
- **Virtusa Neural Hack S6**: Top 3 among 1,000+ participants in national hackathon.
- **Quick Learner**: Self-taught Kubernetes and Kafka in 3 weeks for production deployment, mastered React.js and modern frontend frameworks in 2 weeks for full-stack projects.

LEADERSHIP ACTIVITIES

- **Captain, VVIT Soccer Team**: Led team to three consecutive finals; developed collaboration, strategic thinking, and feedback skills under pressure, directly applicable to leading technical projects and cross-functional teamwork.