Vrishab Shetty

(857) 869-8092 | shetty.vr@northeastern.edu | github | linkedin

EDUCATION

Master of Science in Computer Software Engineering **Sep 2023 – May 2025**
Northeastern University, Boston, MA | GPA: 3.83/4.00
Related courses: Database Management Systems, Cloud Computing, Agile SDLC, Web Development and Object-oriented programming

Bachelor of Engineering in Computer Engineering **Aug 2019 – May 2023**
Xavier Institute of Engineering, Mumbai, India | CGPA: 8.95/10.00
Related courses: Computer Networks, Operating Systems, Computer Architecture, Compiler Design, and Analysis of Algorithms

TECHNICAL SKILLS

Languages: Java, C/C++, Python, Kotlin, JavaScript, Go
Frameworks/Libraries: Spring Boot, React, Express, Hibernate, WebRTC
Cloud Platforms: AWS, GCP, Firebase
Databases: MySQL, MongoDB, Redis, Cloud SQL, Microsoft SQL Server, PostgreSQL
Tools: Git, Docker, Terraform, Gradle, VS Code, Android Studio, JUnit, Jira

WORK EXPERIENCE

Software Engineer | *IpserLab, Boston, MA* **Sep 2025 – Present**
- Designed and implemented a core **WebRTC** signaling infrastructure using Java and **Netty**, enabling **99.9%** successful connections for 50+ concurrent users across real-time communication sessions.
- Built a non-blocking, event-driven **WebSocket** server in Java to handle high-throughput SDP and ICE signaling data, maintaining **<150ms** end-to-end latency under peak traffic loads.
- Optimized backend concurrency and socket handling pipelines to support scalable session routing, improving connection stability by 35% and reducing signaling failures across distributed clients.

Instructional Associate | *Northeastern University, Boston, MA* **Sep 2024 – May 2025**
- Standardized CI/CD workflows using **GitHub Actions and Docker**, accelerating environment setup across **100+** student repositories and improving project delivery timelines by 40%.
- Audited Infrastructure-as-Code deployments with **Terraform** and cloud services (AWS, GCP), enforcing testing practices that increased average repository test coverage to **95%**.
- Mentored students in building production-grade cloud architectures and debugging **distributed systems**, improving issue resolution efficiency by 30% across **DNS**, container orchestration, and pipeline failures.

Android Software Intern | *Books2Trees, Mumbai, India* **Jun 2021 – Oct 2021**
- Re-architected the Android application using Kotlin-based **MVVM** frameworks, reducing feature development turnaround by **50%** and boosting user retention by **20%**.
- Improved application reliability by integrating **Firebase Authentication** for secure session management, sustaining **99.5%** uptime while maximizing ad-revenue delivery metrics.
- Strengthened application quality by building **JUnit** regression test suites covering **85%** of code paths, reducing production bug turnaround time by 40%.

Backend Intern | *CMP Infotech, Mumbai, India* **Dec 2020 – Apr 2021**
- Developed Spring Boot REST APIs for an auction bidding platform supporting **1,000+** concurrent users with transaction response times below 200ms, increasing bid throughput by 50%.
- Containerized backend microservices using **Docker**, enabling zero-downtime deployments and eliminating environment con- figuration inconsistencies across staging and production systems.
- Automated build and deployment pipelines using **GitHub Actions** and implemented Test-Driven Development (TDD), reducing defect rates by 40% and accelerating release cycles by 50%.

PROJECTS

Cloud Native API | *Cloud Infrastructure* | Link
- Engineered high-availability backend infrastructure on GCP using Managed Instance Groups and an **HTTP(S) Load Balancer**, enabling multi-region traffic distribution and fault-tolerant compute scaling.
- Provisioned secure cloud networking with Terraform, building VPC public/private subnets, **Cloud DNS, and SSL/TLS-** enabled endpoints**.**
- Developed event-driven microservices using Cloud Functions and **Pub/Sub**, integrating **Cloud SQL and Cloud Storage** for scalable data persistence, automated processing pipelines, and asset management workflows.

EchoLink | *Local Network Communication Suite* | Link
- Engineered a modular **peer-to-peer** application architecture in Python with plugin capabilities, decreasing debugging time by 20% through isolation, and enabling independent module deployments.
- Executed a zero-configuration device discovery system using **UDP multicast** and built a non-blocking **TCP file transfer protocol** to support efficient peer communications across local networks.