Shreevatsa Ganapathy Hegde

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Summary

Software Engineer with experience in distributed systems, AI, and full-stack development. Skilled in Java, Python, and cloud technologies, with a growth mindset, focus on scalable design, performance optimization, and collaborative problem-solving in fast paced, cross-functional teams.

Education

University of Washington — Bothell, WA
Master of Science in Computer Science — Mar 2026
GPA: 3.95 | Relevant Courses: Machine Learning, Software Architecture, Evaluation of Software Design, Distributed Computing

Visvesvaraya Technological University (VTU) — Bengaluru, IN
Bachelor of Engineering in Computer Science — Aug 2021
GPA: 3.94 | Relevant Courses: Object-Oriented Concepts, Data Structures and Algorithms, Computer Networks, Operating Systems

Work Experience

University of Washington — Bothell, WA
Graduate Researcher — Jun 2025 - Present
- Led a 5-member team to develop a full stack linguistic transcription platform, streamlining researcher workflows and boosting productivity by 20%
- Developed an object-oriented Flask backend with a React-TypeScript UI, improving performance by 40%
- Documented and standardized transcription workflows, gaining strong insights on Software Development Life Cycle
- Optimized relational database and Firebase cloud queries to store audio, reducing average data retrieval time by 35%

Accenture — Bengaluru, IN
Software Engineer — Mar 2023 - Aug 2024
- Designed 6+ Spring Boot microservices and REST APIs for large-scale distributed systems, reducing latency by 30%
- Automated CI/CD pipelines with Jenkins and Gradle, reducing deployment time by 20% and improving observability
- Built responsive React, TypeScript, and Redux web interface for a banking mortgage app, enhancing user experience by 10%
- Leveraged data structures and algorithms to enhance backend performance, improve API response times to under 1.2s
- Mentored junior developers through 100+ code reviews, enforcing security, design pattern usage, and coding standards in agile environment and enhancing code quality and maintainability

Application Development Associates — Dec 2021 - Feb 2023
- Integrated SaaS System with client infrastructure, migrating user profiles from legacy and optimizing API response by 10%
- Designed Java features and used SQL to fetch and troubleshoot user profiles, resolving 95% of issues within SLA
- Led Level 1 technical support, debugging and resolving user-reported issues, improving user satisfaction by 10%
- Executed requirement analysis and implemented end-to-end SDLC tasks, collaborating cross-functionally to deliver scalable, maintainable solutions

Certifications

McKinsey.org Forward Program, McKinsey & Company — Jul 2025
AWS Certified Cloud Practitioner, Amazon Web Services Training and Certification — Dec 2023

Projects

Distributed Tic-Tac-Toe using Java, Sockets, SSH, and Multithreading — Apr 2025 - Jun 2025
- Developed a distributed Tic-Tac-Toe system supporting AI opponent and remote 2-node gameplay
- Leveraged sockets and multithreading to ensure reliable synchronization across nodes, improving consistency by 70%

Mobile Agent System with Inter-Agent Communication and Spawning — Apr 2025 - May 2025
- Engineered a Java mobile agent system for migration across 5+ servers using JSCH
- Built inter-agent communication system and spawned 10+ child agents using synchronized multithreading

Real-Time Flight Data Filtering with Apache Storm — Feb 2025 - Mar 2025
- Built a distributed Storm topology to process and filter 100K+ flight records in real time
- Optimized bolt parallelism for regional and airline grouping, improving processing speed by 85%

Hazelcast-Based Distributed Document Indexing — Feb 2025 - Mar 2025
- Developed a scalable indexing framework across 5+ Hazelcast nodes using Java Servlets and mobile agents
- Integrated hierarchical dispatch and caching mechanisms, reducing query latency by 60%

Variable Graph Analysis and Task Execution — Feb 2025 - Mar 2025
- Designed a distributed graph analysis system supporting 10K+ nodes with configurable task scaling
- Enhanced task scheduling efficiency and visualization, cutting computation time by 40%

Farm Connect Web Portal using Flask   Jan 2025 - Mar 2025
- Created a full-stack web application with HTML5, CSS3, and JavaScript (ES6) to provide farmers with actionable insights
- Implemented a responsive Flask backend to manage data and serve content for the frontend

Smart Waste Sorting System using Raspberry Pi and Artificial Intelligence   Sep 2024 - Dec 2024
- Engineered a Python YOLOv3 + OpenCV system achieving 96% classification accuracy for 3 waste categories
- Deployed on Raspberry Pi edge devices with JSON-based communication, enabling faster automated segregation

Crowd Management System using Raspberry Pi, Machine Learning and Web   May 2021 - Jul 2021
- Built crowd monitoring system using Raspberry Pi and IR sensors, achieving 95% accuracy in detecting crowd density
- Deployed ML-powered predictor via Flask and Node.js servers to forecast crowd surges, reducing on-site congestion by 30%

Stack Overflow Clone   Sept 2019 - Dec 2019
- Developed full-stack Q&A platform using Express.js, MongoDB, and OAuth, enabling secure login and data management for 100+ users
- Implemented user-specific edit access and activity tracking, improving content integrity and user engagement by 25%

NGO Web Application   Sept 2019 - Dec 2019
- Engineered role-based portal with Node.js and MongoDB, digitizing NGO workflows and reducing manual efforts by 40%
- Enabled administrators to manage programs and finances securely, cutting administration overhead by 35%

Skills

Programming Languages:	Java, Python, C++, JavaScript, TypeScript, SQL
Databases & Cloud Technologies:	MySQL, PostgreSQL, AWS, Firebase, Azure, NoSQL (MongoDB)
Operating Systems & DevOps Tools:	Linux, Windows, Git, Jenkins
Web Technologies:	Spring Boot, Spring Framework, Flask, Node.js, React.js, Express.js