NAGESHWARAN MANIKUMAR

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EDUCATION

Stevens Institute of Technology — Hoboken, NJ
Master of Science in Computer Science — *January 2025 – December 2026*

Mary Matha College of Arts and Science — Chennai, India
Bachelor of Computer Application in Software Development — *July 2020 – April 2023*

EXPERIENCE

Software Development Engineer Intern — June 2024 – September 2024
Triple Space Media — *Chennai, India*
- Architected and deployed 15+ REST API endpoints using Python and Flask, processing 2,000+ daily requests with average response time under 300ms
- Optimized PostgreSQL database queries by implementing B-tree indexing, reducing query execution time by 45% for data retrieval operations
- Spearheaded automated testing with Pytest, achieving 95% code coverage across 2,500+ lines of code and reducing bug reports by 30%
- Collaborated with agile team of 10 engineers, conducting 20+ code reviews and participating in sprint planning to deliver 8 features on schedule

Full-Stack Software Engineer Intern — July 2023 – December 2023
Xypnotix — *Chennai, India*
- Engineered project management dashboard using React.js and Node.js, improving task completion tracking by 25% for 25+ teams managing 400+ projects
- Led refactoring initiative for 40+ React components using reusable design patterns, reducing bundle size by 28% and improving page load time by 1.8s
- Drove system reliability improvements through performance optimization, increasing application uptime from 94% to 98.5% over 6-month period
- Integrated monitoring solutions with real-time alerting, reducing incident detection time from 12 minutes to under 3 minutes for critical issues

PROJECTS

NYC Arrest Data Visualization & Analysis System | *Node.js, Express.js, MongoDB* | [GitHub](#) — December 2025
- Engineered full-stack application processing 212K+ NYC arrest records with data pipeline achieving 92% accuracy and sub-800ms query times
- Designed RESTful APIs with Express.js and MongoDB implementing pagination and filtering, handling 200+ concurrent users during testing
- Implemented security framework with bcrypt hashing, XSS protection, and session management, passing 15+ security test cases
- Developed Chart.js dashboards with CSV/PDF export functionality, supporting visualization of up to 50K records per view

Strava Lite - Workout Tracking API | *Python, Flask, REST API* | [GitHub](#) — 2025
- Architected RESTful API with Flask for user authentication and workout logging, processing 300+ requests/min during load testing
- Implemented 8 API endpoints with standardized HTTP codes (200, 400, 403, 404), achieving 150ms average response time
- Designed friend-following system with access control, tested with 50+ simulated users and 500+ workout entries
- Authored comprehensive API docs with cURL examples for 20+ use cases, reducing integration time by 40%

Interactive Developer Portfolio Website | *HTML5, CSS3, JavaScript* | [GitHub](#) | [Live](#) — 2024
- Developed personal portfolio using vanilla JavaScript with no frameworks, achieving 92 Lighthouse score and 1.4s load time
- Implemented Matrix-style canvas animation at 60 FPS and parallax scrolling, enhancing user engagement by 35%
- Optimized rendering with GPU-accelerated CSS transforms, reducing JavaScript execution time by 38% on mobile devices
- Deployed responsive website supporting 320px to 4K displays, tested across 8 devices and browsers via GitHub Pages

TECHNICAL SKILLS

Languages: Python, JavaScript, C++, SQL
Frontend: React.js, HTML/CSS, Handlebars, Chart.js
Backend: Flask, Node.js, Express.js, REST APIs
Databases: MongoDB, MySQL
Tools & Technologies: Git, GitHub, Postman, Pytest, AWS (familiar), Terraform (learning)
Concepts: Object-Oriented Programming, Data Structures & Algorithms, Agile Development, Software Testing