

Vishali Mani Paramesvari

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EXPERIENCE

Software Engineer, CrowdDoing, USA

May 2025 – Present

- Architecting an event-driven MCP agent that matches 1,000+ weekly user profiles to specific technical requirements.
- Developing scalable recommendation workflows by engineering data pipelines that transform 5,000+ unstructured legacy profiles into structured datasets.

Software Engineer (Graduate Consultant), Nissha Medical Technologies, Buffalo, NY, USA

September 2025 – December 2025

- Automated manufacturing quality analysis for ~1M daily units by prototyping an AI-driven inspection system combining computer vision and real-time sensor telemetry.
- Enabled real-time defect detection at line speed by optimizing inference deployment pipelines to achieve sub-50ms processing on edge hardware.

Software Development Engineer, Siemens Technologies and Services Pvt. Ltd, India

June 2019 – July 2024

- Engineered backend services in C#/.NET Core and Go, enabling high-throughput, event-driven workflows processing 100k+ energy records daily across Building-X platform.
- Automated setup of SQL stored procedure scripts using Flyway reducing manual errors and environment setup time by 80%.
- Built 3 reusable Angular components in SiMPL, Siemens private NPM library used across global products reducing UI duplication.
- Enabled reliable async messaging across high-volume, multi-tenant energy data workloads by building event-driven microservices with AWS SQS/SNS pub/sub patterns, leveraging platform-guaranteed delivery for critical energy data pipelines.
- Delivered real-time data visualization for commercial building operators by building Angular micro-frontend dashboards rendering 100k+ energy KPI datapoints displaying consumption, carbon emission baselines and forecasted supply demands.
- Cut deployment time by 50% by migrating CI/CD pipelines from Jenkins to GitLab; leveraged feature toggles, release metrics, and Grafana/CloudWatch alerting to improve production observability across environments.
- Won Product Category at Hackathon-19 by prototyping a proactive maintenance dashboard enabling field engineers to monitor and manage access controls in real time.
- Reduced onboarding time from 3 weeks to 10 days by mentoring 3 junior engineers and onboarding 5 new team members through structured code reviews, pair programming and technical documentation.

Software Developer Intern, Siemens Technologies and Services Pvt. Ltd, India

January 2019 – June 2019

- Raised code coverage to 93% and improved SonarQube code quality to Grade A by implementing NUnit testing frameworks in .NET Core to establish the testing standard adopted by the full team.
- Reduced REST API latency by 40% for key workflows by optimizing request/response handling through query optimization and response caching.
- Built a proof-of-concept for recursive tree structures representing buildings, sites, and meters as hierarchical nodes for the DDA tool within the Siemens Navigator ecosystem – the approach was adopted into production as core visualization structure.

TECHNICAL SKILLS

- **Languages:** C#, Go (Golang), Python, TypeScript, Node.js, JavaScript, SQL, HTML/CSS
- **Frontend:** Angular, Micro Frontend Architecture, Next.js
- **Backend & Systems:** .NET Core, REST APIs, Microservices, Event-Driven Architecture, Distributed Systems, BFF Pattern
- **Cloud & DevOps:** AWS (Lambda, DynamoDB, S3, SQS, SNS, IAM, CloudWatch), Docker, Kubernetes, GitLab CI/CD
- **Databases:** DynamoDB, MongoDB, PostgreSQL, MySQL
- **AI & Agentic Systems:** MCP (Model Context Protocol), LLM Integration, Computer Vision, Reinforcement Learning
- **Domain:** Energy Management, Sustainability KPIs, Smart Buildings, Industrial Automation
- **Engineering Practices:** System Design, SDLC, Agile, Unit Testing, Debugging, Observability, Feasibility Analysis

PROJECTS

RepoSentinel - Autonomous AI Code Review Agent

- Built an agentic code review system in Python using Anthropic Claude API, ChromaDB and Github actions with a structured eval harness covering 25 golden test cases (SQL injection, XSS, race conditions) & A/B prompt comparison tooling to measure review quality

Citylearn - Power Grid Optimization (Reinforcement Learning)

- Trained centralized agents using PPO and SAC algorithms to optimize battery storage control, successfully reducing peak loads and carbon footprints in a simulated power grid environment.

EDUCATION

Master of Science, Engineering Science (Artificial Intelligence)
University at Buffalo, State University of New York

August 2024 – February 2026
GPA: 3.63

Master of Science (5 years integrated) Computer Science
College of Engineering Guindy, Anna University

August 2014 – April 2019
GPA: 8.43