

MANOJ V

Senior Software Engineer

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🔗 <https://mano-jv.github.io/github-portfolio/>

PROFILE

Dedicated Software Engineer with expertise in Java, Spring Boot, Python, LLM and cloud technologies. Seeking opportunities to drive innovation and efficiency in a dynamic organization.

PROFESSIONAL EXPERIENCE

Senior Software Engineer, Trimble Inc.

2021 – present
Chennai, India

- **TrimbleCompass**, an AI Assistant powered by Azure OpenAI that delivers context-aware information on Trimble products—cutting customer support requests by 25%.
- **Ingestion Pipeline**, Designed a GitHub Actions–powered automated pipeline with contextual parsing and image ingestion to purge stale documents and re-index the RAG knowledge base.
- **Token Optimization**, custom URL-shortening service for source links, slashing token usage in retrieval-augmented generation workflows by over 15%.
- **Multimedia Embedding**, Integrated support for screenshots and embedded imagery directly into the RAG framework, enabling richer, visual LLM responses.
- **MCP Authorization Server**, Implemented an authorization server following the MCP Authorization protocol with dynamic client registration, built as a wrapper around TID
- **Driver-Order Matcher**, Developed a CP-SAT optimization engine–driven scheduling system, augmented with an LLM-powered chatbot interface for interactive fleet management and dynamic dispatching.
- **AgenticWorkflow**, Built an agentic system that auto-reads Jira tickets, identifies needed actions via MCP, and triggers the right internal APIs.
- **TTC Introspection**, Integrated Redis for latency reduction and concurrency management, handling ~3 million daily requests.
- Built a Kubernetes operator to manage the Service Registry. Developed performance test scripts using Gatling and Scala to identify bottlenecks.

Graduate Engineering Intern, Trimble Inc.

- Contributed to Java Spring Boot projects and achieved >80% unit test coverage.
- Integrated Datadog for service-level agreement (SLA) monitoring and reporting.
- Fixed Whitesource and Sonar vulnerabilities, resulting in a Grade A code quality rating and zero vulnerabilities.

January 2021 –
June 2021
Chennai, India

SKILLS

Programming Languages

Java, Python, JavaScript

Databases

MongoDB, Redis, Elastic Search

Cloud Technologies, Containers and Orchestration

Kubernetes, Azure, GCP, Docker

Technologies

Spring Cloud Data flow, Signal R

Frameworks

Spring Boot, FastAPI, Flask, React, Langgraph, Google ADK

Message Brokers

Kafka, RabbitMq

Testing

PyTest, Gatling, Selenium, DeepEval

Azure Technologies

AI Document studio, Blob Storage, SignalR

EDUCATION

Master of Business Administration : Technology Management,
Anna University Centre For Distance Education

2023 – 2025
Chennai

Bachelor Of Engineering: Computer Science and Engineering,
R.M.K Engineering College

2017 – 2021

CERTIFICATES

Business Vantage examination

Cambridge English BEC Business Vantage examination and was awarded with GRADE C

AWARDS

- Delivered a research paper and demo at the 2025 Trimble Technology Conference in Germany.
- Top 15 finalist in Trimble Internal Hackathon.

HOBBIES

- Playing football and badminton
- Watching series/movies of all languages