Navinshankar Goppinar Venkidupathy

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Education

Northeastern University **Sep 2023 – Dec 2025**
M.S. in Information Systems *Silicon Valley, CA*

Anna University **Aug 2018 – May 2022**
B.E. in Computer Science & Engineering *Coimbatore, India*

Experience

Software Engineer Intern **Jan 2025 – Jul 2025**
IpserLab *California, USA*

- Developed backend services for a rental application using Python and Flask with PostgreSQL-backed to support listing, availability, and booking workflows, reducing request processing time by 35% across synchronous and batch-driven execution paths.
- Diagnosed performance bottlenecks in search and booking APIs by analyzing request logs and execution paths, optimizing critical endpoints to improve response consistency under concurrent user traffic.
- Containerized backend services using Docker to standardize local and production environments while prototyping AI-assisted features via external AI APIs, enabling reproducible builds and controlled validation of listing enhancement and search relevance improvements.

Software Engineer **Nov 2022 – Jul 2023**
Viatore Solutions *Coimbatore, India*

- Developed backend services using FastAPI and Django to support core application workflows, restructuring endpoints to reliably handle concurrent traffic and variable request patterns under peak production load.
- Diagnosed tail-latency spikes by correlating request logs with database query traces and validating slow paths with *EXPLAIN ANALYZE*, isolating hot endpoints with repeated reads that surfaced only under concurrent access.
- Reduced API p95 latency by 45% by removing redundant ORM round-trips, introducing Redis caching for hot records, and refactoring synchronous long-running operations into asynchronous workers to prevent request thread starvation.
- Deployed and supported production services on AWS using EC2, RDS, and serverless components (Lambda), containerizing services with Docker and adding structured logging, health checks, and automated restarts to improve system stability and sustain 99.9% uptime.

Software Engineer Intern **Feb 2022 – Aug 2022**
Thirdware Inc Solutions *Chennai, India*

- Designed and built an internal project-tracking platform using Java, Springboot, Angular and Nodejs to replace fragmented spreadsheet and email-based updates, improving cross-team project visibility, accountability, traceability, and reducing status-tracking overhead by 40%.
- Implemented secure authentication and role-based access (RBAC) using Google OAuth 2.0, modeling users, roles, and permissions as domain entities to eliminate shared credentials and enforce centralized access control.
- Improved average API response times by 30% by reviewing query execution paths, reducing redundant data access, and applying object-oriented service and repository abstractions to localize business logic and simplify performance tuning.

Projects

Research Summarizer | *Python, FastAPI, OpenAI API* **Sep 2025 – Dec 2025**

- Built a Python FastAPI-based document summarization service and handled LLM token limits by implementing recursive chunking and batching logic, enabling reliable processing of long research PDFs without truncation or partial summaries.
- Improved output quality by iterating on prompt structure and adding post-processing validation checks, filtering low-confidence or off-topic summaries based on evaluation metrics observed during testing runs.

LabelFlow AI | *Go, FastAPI, Redis, React* **May 2025 – Aug 2025**

- Implemented high-throughput asynchronous services using Go-backed workers and Redis queues, validating failure handling, data consistency, and throughput under concurrent batch submissions.
- Resolved request blocking during batch submissions by offloading labeling operations to asynchronous workers backed by Redis queues, and instrumented queue depth and processing-time metrics to identify throughput bottlenecks.

HashtagHolidays | *Python, FastAPI, Docker, MongoDB, DialogFlow* **Aug 2024 – Dec 2024**

- Developed a Python-based recommendation engine using FastAPI and Docker to ingest and process Instagram interaction data, perform content classification and NER-driven data processing, and generate personalized travel destination signals with robust error handling.
- Implemented a deterministic scoring pipeline with frequency–recency decay, browsing-history and Google Maps adjustments, persisting results in MongoDB and exposing ranked recommendations through REST APIs and a Dialogflow-integrated conversational interface.

Skills

Languages: Python, Java, JavaScript, SQL, C, Go
Frameworks: FastAPI, Django, Flask, Spring Boot, Node.js
Databases: PostgreSQL, Redis, MongoDB
Cloud & DevOps: Docker, Git, GitHub Actions (CI/CD), AWS (EC2, Lambda, RDS, S3, SQS)