

Vishnu Vardhan Manivannan

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WORK EXPERIENCE

Software Development Engineer L1, HipBar Pvt. Ltd., India

June 2019 – Dec 2021

- Led the design and development of an in-house promotion engine, replacing a costly third-party service and reducing operational costs by 72%.
- Boosted authentication performance by integrating Redis caching, cutting database lookups by 40% and significantly lowering API response latency.
- Migrated one-third (33%) of core Python microservices to Go, leveraging Gin and gRPC to improve concurrency, throughput, and runtime efficiency.
- Built NATS/RabbitMQ-based asynchronous worker systems for notifications and internal event processing, improving scalability and decoupling distributed microservices.
- Standardized observability using Jaeger, OpenTracing, and Sentry, enabling trace propagation, distributed debugging, and better error visibility across services.
- Expanded test coverage and handled environment variables and secrets for the services I owned. Built Docker images used directly in CI/CD deployments.

PROJECTS

GoDrive (Cloud Storage Backend)

Sept 2025 – Nov 2025

- Built a production-style cloud storage backend using Go microservices, gRPC, and JWT-based authentication, with clear boundaries for auth, metadata, and file operations.
- Implemented upload/download flows using MinIO presigned URLs, enabling stateless access with automatic expiry.
- Designed PostgreSQL schemas for users and files, adding soft-delete support and indexing.
- Developed NATS workers to process storage events: insert file metadata after uploads and permanently delete objects after a grace period.
- Containerized all services with Docker Compose (gateway, metadata, storage, DB, MinIO, NATS).
- Currently developing a React + TypeScript frontend to integrate with the backend.

Wikipedia Web Traffic Forecasting

Sept 2023 – Dec 2023

- Built an ensemble forecasting model combining ARIMA and LSTM to predict 18 months of Wikipedia page views, applying large-scale preprocessing on 145K time series.
- Improved forecast accuracy by 14% RMSE over the best individual model, validated using RMSE and SMAPE—demonstrating the effectiveness of hybrid statistical–deep learning approaches.

SKILLS & TOOLS

Programming: Golang, Python, C++; **Databases:** PostgreSQL, MySQL, Redis, Memcached, MinIO; **Backend:** Gin, gRPC, Docker, Messaging Queues (NATS, RabbitMQ, ZeroMQ); **Observability:** Sentry, Kibana, OpenTracing, Jaeger; **Tools:** Git, GitHub, Linux/Unix, Jupyter Notebook, Vim, Jira, ClickUp

EDUCATION

University at Buffalo, The State University of New York

Aug 2023 – Dec 2024

Master of Science: Industrial Engineering (Data Analytics Concentration)

GPA: 3.51/4.0

Imarticus Learning

Jan 2022 – Oct 2022

Graduate Certificate: Data Analytics and Machine Learning

GPA: 9.61/10

SRM Institute of Science and Technology

July 2015 – May 2019

Bachelor of Technology: Electrical and Electronics Engineering (EEE)