NAVEEN O V

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Education

St. Albert's College (Autonomous)   June 2023 – June 2026
B.Voc. Software Development

Experience

Golang Engineer Volunteer, Makerble - United Kingdom   Feb 2025 – Present

Makerble is a UK-based civic-tech platform that helps NGOs and government bodies track progress, measure impact, and streamline operational data workflows through customizable dashboards and reporting tools. Joined as the first and core backend developer in the Golang team, taking ownership of backend infrastructure and modularizing core services into reusable components aligned with Go project structure.

- Operated in a dual role as a database architect, laying the foundation for a scalable and maintainable codebase by restructuring PostgreSQL schemas and domain groupings.
- Spearheaded restructuring of 350+ PostgreSQL tables by grouping them by domain, refactoring functionality schemas, and formalizing consistent naming conventions.
- Migrated complex JSONB fields to normalized relational tables, significantly improving query performance, event-driven processing, and data integrity.
- Designed 30+ detailed ER diagrams for product features and internal tools, serving as blueprints for development, onboarding, and cross-functional planning.
- Led schema and data migration strategies, balancing top-down vs. bottom-up approaches, validating tooling, and ensuring consistency across staging and production environments.
- Collaborated with engineers by reviewing queries, optimizing database interactions, and suggesting structural improvements; documented architectural decisions to align all stakeholders.
- Developed a lightweight, stateless Slack bot in Go using Slack and Jira APIs to automate daily stand-ups, reduce manual friction, and enhance team accountability.
- Built custom Jira workflows with automation rules, integrating GitHub activity to streamline issue tracking, status updates, and repository coordination.

Open Source Contributor, flowg – Link Society (Remote)   May 2025 – Present

- Implemented Splunk HTTP Event Collector (HEC) forwarder with secure token-based authentication, proper header formatting, and event payload structure for Splunk ingestion.
- Integrated OpenTelemetry (OTLP) HTTP support for log forwarding. Built backend ingestion and frontend configuration interface compatible with collectors like Jaeger.
- Engineered secure admin bootstrapping via CLI flags and environment variables, enabling initial setup with customizable credentials.
- Designed and applied global dark mode across the UI using TailwindCSS and React theming context, improving accessibility and user experience.
- Wrote unit and integration tests using Hurl for both OTLP and Splunk forwarders, validating payloads and endpoint behavior via mock servers.
- Authored contributor-focused documentation for OTLP and Splunk, including environment setup, UI config, and forwarder integration steps.

Projects

FileMove | TCP File Server   Link
- Built a terminal-based file server using TCP protocol for file transfers
- Developed CLI tools with Cobra for upload/download/metadata actions

- Used PostgreSQL to store file metadata and transfer logs
- Secured client-server communication with TLS
- Tools Used: Go, TCP, Cobra, PostgreSQL, TLS

Social | Social Networking Platform   Link
- Implemented user authentication, profile management, and search
- Added email-based account activation
- Integrated Redis for caching and PostgreSQL for storage
- Tools Used: Go, Redis, PostgreSQL

Console-Chat | Scalable Chat Application (In Progress)   Link
- Created a terminal-based real-time chat system using WebSockets
- Used Kafka for message queuing and Redis for fast access
- Supported user and group chats with PostgreSQL persistence
- Tools Used: Go, WebSockets, Kafka, Redis, PostgreSQL

Technologies

Languages: C, C++, HTML, CSS, Javascript, Go, Python, SQL

Frameworks: React.js, Django(Python), TailwindCSS, Gin, Chi, Cobra-CLI
Tools: Docker, PostgreSQL, Redis, Kafka, WebSocket, Postman, Firebase, Pandas, Selenium, BeautifulSoup, Jira, Confluence, Atlas

Extracurricular Activities

- Optimized the `EXISTS` command in DiceDB (10k+ GitHub stars) by migrating it to the IronHawk engine.
- Coordinated the department at the college expo—led and guided team members, managed, developed and showcased projects in Networking and AI, resulting in 200+ interactions.