

# VISHNU SUBRAMANI

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## EDUCATION

### University of Waterloo

Honours BAsC in Management Engineering - GPA 3.90/4

**Awards:** President's Scholarship of Distinction, Maximum Entrance Scholarship

Waterloo, ON

Expected 2029

## TECHNICAL SKILLS

**Languages:** Python, JavaScript, TypeScript, HTML/CSS, SQL, Bash, Excel VBA, C++ , Java (basic)

**Frameworks/Libraries:** React, Next.js, Node.js, Express.js, FastAPI, TailwindCSS, Chart.js, Three.js, Prisma, Mongoose, Recharts

**Databases:** DynamoDB, MongoDB, PostgreSQL, MySQL, Firebase, Supabase

**Cloud/DevOps:** AWS (Lambda, API Gateway, DynamoDB, Cognito, EventBridge, S3, SES, Bedrock), Vercel, Google Cloud, Docker

**Tools/Platforms:** Git/GitHub, Postman, Jira, Figma, Notion, Backstage, Stripe API, OpenAI API, REST APIs, WebSockets

## EXPERIENCE

### AI Software Engineer/Solutions Architect

January 2026 – April 2026

Sun Life Financial

Toronto, ON

- Engineered a **RAG pipeline** using **Amazon Bedrock**, **Titan V2**, and **pgvector** on **RDS PostgreSQL** for **policy validation**.
- Built a concurrent **AWS Lambda** backend in Python with **multi-threaded processing**, reducing validation time by **70%**.
- Deployed containerized services on **Red Hat OpenShift** with **nginx**, **ConfigMaps**, and custom **OCI container images**.
- Integrated the validation engine into **Spotify Backstage** via **Confluence API** and a **React/TypeScript** portal plugin.

### Backend Developer Intern

May 2025 – August 2025

Serverless Guru

Remote – Wilmington, DE

- Architected and built a scalable backend with **AWS Lambda**, **API Gateway**, and **DynamoDB**, achieving **99.9% uptime**.
- Improved filtering with **DynamoDB overloaded sort keys**, cutting query costs by **35%** and boosting speed by **60%**.
- Streamlined infrastructure using the **Serverless Framework (v4)** with **YAML-based IaC**, cutting deployment time by **80%**.
- Authored internal training materials and contributed to onboarding docs, improving new engineer ramp-up speed.

### Software Engineer

April 2025 – Present

TEDxUW

Hybrid – Waterloo, ON

- Built speaker and ticket sales dashboard using **Next.js**, **React**, and **TypeScript**, enabling responsive, high-traffic-ready UI.
- Designed and integrated user profile schema via **Prisma** and **Neon PostgreSQL** to store attendee and sponsor preferences.
- Implemented **Clerk** authentication with Google and Discord logins, reducing support requests by **30%**.
- Collaborated in **Figma** to create mockups and components, streamlining UI flow and boosting dev speed across the team.

### Software Developer

May 2024 - August 2024

MarTechBees

Toronto, ON

- Built a serverless web app for property managers using **AWS** services, reducing workload and cutting costs by **25%**.
- Developed backend logic with **Lambda** functions in **TypeScript** connected to **API Gateway** for seamless routing.
- Implemented full **CRUD** functionality using **DynamoDB**, automating data processes and reducing manual entry by **80%**.
- Created interactive dashboards with **Recharts** in **React** to visualize unit status and lease expiration trends.
- Integrated **Stripe API** for secure payment processing via **HTTP POST**, improving tenant transaction flow.


## PROJECTS

**Findr** | Python, React.js, FastAPI, MongoDB, Gemini AI, Google Vision API, PyPDF2, OAuth 2.0

 [GitHub](#)

- Engineered a full-stack hackathon team matchmaking platform based on **React.js**, **FastAPI** and **MongoDB** with **OAuth 2.0** authentication, enabling AI-driven profile generation.
- Integrated **Gemini AI**, **Google Vision** and **PyPDF2** for resume analysis resulting in accurate profile generation.
- Implemented real-time swipe-based matching system using **FastAPI** and **MongoDB**, generating personalized team recommendations while tracking mutual matches with optimal user profiles for elevated team performance.

**Serverless E-commerce Platform** | TypeScript, AWS Lambda, DynamoDB, Cognito, SES, EventBridge

 [GitHub](#)

- Built a fully serverless e-commerce system with **15+ Lambda functions**, eliminating backend server management.
- Implemented a single-table **DynamoDB** schema with **GSIs**, enabling fast, cost-efficient querying for items and orders.
- Secured APIs with **Cognito** and automated order emails via **SES**, enhancing authentication and communication.

**Spotify Playlist Genre Analyzer** | JavaScript, React, Chart.js, Spotify API

 [GitHub](#)

- Analyzed genre distribution in Spotify playlists (up to **60 songs**) using the **Spotify Web API** for real-time data.
- Created responsive visualizations with **Chart.js**, improving user insight into listening habits and preferences.
- Utilized **Axios** for automated API data fetching, reducing manual input effort by over **80%**.