

HARSHA VARDHAN YELLELA

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SUMMARY

Software Engineer with hands-on experience building **scalable backend systems**, **RESTful APIs**, and **cloud-native microservices**. Proficient in **Python (FastAPI)**, **Go (Gin)**, and **AWS services (Lambda, ECS, DynamoDB)**. Built production systems handling **94+ serverless functions**, **third-party integrations (Stripe, Twilio, DocuSign)**, and **Kubernetes deployments**. Strong foundation in **API design**, **containerization**, **CI/CD pipelines**, and **database optimization**.

EXPERIENCE

Graduate Research Assistant – Agentic AI

Jan 2025 – Dec 2025

Lawrence Technological University

Southfield, MI

- Deployed persistent **backend services** on **AWS Fargate** and **Amazon EKS**, integrating **OpenSearch Serverless** for semantic search and document retrieval.
- Built **multi-agent systems** using **Python (CrewAI + LangChain)** with **RESTful APIs** for workflow automation and intelligent decision-making.
- Designed **hybrid service pipelines** achieving **70% reduction in manual process time** through automation and API orchestration.

Infor India Pvt. Ltd.

Apr 2022 – Dec 2023

LN Technical Consultant

Hyderabad, India

- Developed **modular, production-ready tools** for global clients (**Ferrari, Boeing, Triumph**) by extending **Infor LN ERP** workflows for inventory and manufacturing.
- Integrated **AWS S3, Lambda, and API Gateway** with enterprise systems to enable **asynchronous data pipelines**, reducing **batch processing delays by ~40%**.
- Containerized** business logic services using **Docker** and orchestrated deployments, improving **consistency** across client environments.

TECHNICAL SKILLS

- Languages:** Python, Go, TypeScript, JavaScript, SQL, Bash | **Core:** Data Structures, Algorithms, OOP
- Backend Frameworks:** FastAPI, Flask, Gin (Go), Express.js | Pydantic, JWT, CORS, HATEOAS
- Cloud (AWS):** Lambda, ECS Fargate, EC2, API Gateway, S3, DynamoDB, ECR, SQS, SageMaker
- Databases:** PostgreSQL, MySQL, SQLite, DynamoDB, MongoDB | **Caching:** Redis | **Vector:** Qdrant, pgvector
- DevOps:** Git, Linux, Docker, Kubernetes (EKS), Terraform, Jenkins, GitHub Actions, CI/CD Pipelines
- Practices:** Agile/Scrum, Unit Testing, Integration Testing, Code Reviews, RESTful API Design
- Integrations:** Stripe, Twilio, DocuSign, QuickBooks, OpenAPI/Swagger

PROJECTS

Blindspot – Cognitive Bias Detector Chrome Extension

Jan 2026

JavaScript, Chrome Extension (Manifest V3), Claude API, Service Workers | [GitHub](#)

- Built **Chrome Extension** with **Manifest V3 architecture** using **Service Workers**, **Content Scripts**, and **Context Menu API** for real-time webpage analysis.
- Integrated **Claude API** for AI-powered cognitive bias detection; implemented **keyboard shortcuts (Ctrl+Shift+B)** and **right-click context menu triggers**.
- Designed **proactive intervention system** monitoring high-risk sites (e-commerce, subscriptions) with **content script injection** for universal webpage support.

AI Resume Builder (Resumade.in) – Serverless Backend

Dec 2025

FastAPI, AWS Lambda, DynamoDB, GPT-4, Gemini, BeautifulSoup

- Architected **serverless backend** using **FastAPI + AWS Lambda + DynamoDB** with **95%+ uptime** and **sub-2s PDF/Word generation**.
- Integrated **multi-LLM pipelines (GPT-4, Gemini, DeepSeek)** with custom prompts; implemented **LinkedIn job scraping** for tailored resume optimization.
- Configured **JWT + Google OAuth authentication** and **CI/CD via GitHub Actions**, reducing manual resume effort by **80%**.

Online Learning Portal – Microservices CI/CD Platform

Nov 2025

FastAPI, Jenkins, Docker, Kubernetes, AWS ECS Fargate | [GitHub](#)

- Built **6-microservice platform** (user, course, enrollment, payment, notification, API gateway) using **FastAPI** with **Docker containerization**.
- Implemented **branch-per-service CI strategy** with **Jenkins Multibranch Pipeline**; automated Docker builds with **commit hash tagging**.
- Deployed to **AWS ECS Fargate** with **ALB routing**, **ECR registry**, and **Kubernetes manifests** for EKS deployment.

Job Portal REST API – Full-Stack Job Listing Platform

Python, FastAPI, SQLite, Docker, AWS ECS/ECR | [GitHub](#)

- Built **production-ready RESTful API** with **25+ endpoints** supporting full CRUD operations for job seekers, employers, postings, and applications with **Pydantic v2 validation**.
- Designed and implemented **HATEOAS-compliant architecture** enabling hypermedia-driven navigation, improving API discoverability and client integration.
- Containerized using **Docker Compose** with persistent volumes; deployed to **AWS ECR/ECS** demonstrating end-to-end **CI/CD pipeline**.

Oct 2025

FieldFuze Backend – Enterprise Go API with Multi-Tenant RBAC

Go 1.23, Gin, DynamoDB, JWT, Docker, GitHub Actions

- Built **production-ready REST API** in **Go/Gin** with **multi-tenant RBAC architecture**, implementing complete user lifecycle (register, login, logout, validate).
- Designed **modular architecture** using **controller → service → repository pattern** with comprehensive middleware (JWT auth, CORS, logging).
- Created **infrastructure automation worker** for DynamoDB table/index management; wrote extensive **unit tests** for all layers.

Dec 2024

Lambda Microservices Platform – Field Service Backend

Python, AWS Lambda, DynamoDB, S3, Stripe, Twilio, DocuSign, Terraform

- Developed **94 AWS Lambda functions** for complete SaaS platform, integrating **Stripe Connect** for vendor onboarding and payment processing.
- Implemented **DocuSign e-signature workflow**, **Twilio calling integration**, and **QuickBooks accounting sync** for invoicing automation.
- Built **automated deployment pipeline** with Git change detection using **Terraform IaC** and **CloudFormation** templates.

Dec 2024

EDUCATION

Lawrence Technological University

Master of Science in Computer Science · GPA: 3.6/4.0

- Relevant Coursework:** Machine Learning, Artificial Intelligence, Natural Language Processing, Intelligent Robotics (ROS), Cloud Microservices

Jan 2024 – Dec 2025

Southfield, MI

Geethanjali College of Engineering & Technology

Bachelor of Technology in Computer Science & Engineering · GPA: 7.5/10 (~3.0/4.0)

- Relevant Coursework:** Software Engineering, Data Structures & Algorithms, Database Management, Operating Systems

Aug 2018 – Aug 2022

Hyderabad, Telangana

ACHIEVEMENTS

- Selected for Amazon Nova AI Challenge: Trusted AI Track** (2025)
- Built production SaaS platform** with 94 Lambda functions serving real customers (2024)
- Gold Medalist in Indian National Mathematical Olympiad (INMO)** (2012)