HARSHA VARDHAN YELLELA

United States | +1-248-497-9965 | harsha.yellela@gmail.com | LinkedIn | GitHub

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 – Present**
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

Job Portal REST API – Full-Stack Job Listing Platform   **Oct 2024 – Present**
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**.

FieldFuze Backend – Enterprise Go API with Multi-Tenant RBAC   **Aug 2024 – Present**
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.

Lambda Microservices Platform – Field Service Backend   **2024**
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.

AI Resume Builder (Resumade.in) – Serverless Backend   **Jun 2025 – Present**
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%**.

Telegram Toxicity Moderator – Production K8s ML Platform   **Oct 2024 – Nov 2024**
FastAPI, Kubernetes (EKS), Prometheus, Grafana, HPA | GitHub
- Built **real-time toxicity detection API** with **HuggingFace toxic-bert**, deployed on **AWS EKS** with **Horizontal Pod Autoscaler**.
- Configured **circuit breaker pattern** (5 failures, 30s recovery) achieving **500 RPS average, 1500 RPS peak** with **~3-5ms inference latency**.
- Created **Prometheus metrics + Grafana dashboards**; reduced costs **70%** with spot instances and aggressive scale-down policies.

Car Dealer App – Full-Stack Kubernetes Application   **Oct 2024**
Flask, PostgreSQL, Docker, Kubernetes, Nginx | GitHub
- Built **3-tier architecture** (Nginx → Flask API → PostgreSQL) with **10+ REST endpoints** for car inventory management with full CRUD operations.
- Configured **Kubernetes** deployments with **readiness/liveness probes**, **PersistentVolumeClaims**, and **2 replicas** for frontend/backend.
- Wrote **comprehensive shell scripts** for deployment automation; designed responsive UI with statistics dashboard.

EDUCATION

Lawrence Technological University   **Expected Dec 2025**
*Master of Science in Computer Science · GPA: **3.6/4.0***   *Southfield, MI*
- **Relevant Coursework: Machine Learning**, **Artificial Intelligence**, **Natural Language Processing**, **Intelligent Robotics (ROS)**, **Cloud Microservices**

Geethanjali College of Engineering & Technology   **Graduated: August 2022**
*Bachelor of Technology in Computer Science & Engineering · GPA: **7.5/10 (~3.0/4.0)***   *Hyderabad, Telangana*
- **Relevant Coursework: Software Engineering**, **Data Structures & Algorithms**, **Database Management**, **Operating Systems**

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)