

# HARSHA VARDHAN YELLELA

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## ABOUT ME

**Backend Engineer** with experience in **Infor ERP** system development (**LN, ION**) and building **scalable AI tools** like Resumade.in, using **FastAPI, AWS Lambda**, and **multi-LLM pipelines (GPT-4, Gemini)** to deliver **cloud-native automation**.

## EXPERIENCE

**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, manufacturing, and finance using **BaanC, ION, and DBMS**.
- Integrated **Infor ION** process flows with **AWS S3, Lambda, and API Gateway** to enable **asynchronous file transfer** and external service triggers, reducing **batch processing delays by ~40%**.
- Containerized** business logic services using **Docker** and simulated **Kubernetes-like orchestration** with Infor ION, improving **deployment consistency** and cross-module communication across client environments (e.g., Weiler, Immucor).

## TECHNICAL SKILLS

- Languages & APIs:** Python, JavaScript, SQL, RESTful API Design
- Backend & Cloud:** FastAPI, Flask, AWS (Lambda, SageMaker, FinSpace, Bedrock), CI/CD (GitHub Actions)
- AI/ML & NLP:** GPT-4, Gemini, DeepSeek, LangChain, TensorFlow, VADER, LSTM, Transfer Learning, Sentiment Analysis
- Automation & Agents:** CrewAI, n8n, BeautifulSoup, Web Scraping, Agent Orchestration
- Data & Storage:** DynamoDB, PostgreSQL, Pandas, NumPy
- Tools & Frameworks:** Docker, Git, Pydantic, OpenCV, Matplotlib
- Enterprise Systems:** Infor LN, Infor ION, BaanC, Manufacturing & Finance Modules

## PROJECTS

**AI Resume Builder – Backend Engineer**

**Jun 2025 – Present**

*[Resumade.in](#) | FastAPI, AWS Lambda, DynamoDB, GPT-4, Amazon Bedrock (DeepSeek)*

- Architected and deployed a **serverless backend** using **FastAPI, AWS Lambda, and DynamoDB**, enabling **auto-scaling, 95%+ uptime**, and **sub-2s PDF/Word resume generation**.
- Integrated **multi-LLM pipelines (GPT-4, Gemini, DeepSeek)** with **custom prompts** to tailor resumes based on job descriptions scraped via **LinkedIn parsers and BeautifulSoup**.
- Implemented **secure JWT and Google OAuth authentication**, **CI/CD via GitHub Actions**, and **real-time scraping + AI optimization pipelines**, reducing **manual resume effort by 80%**.

**AgenticAI – Agent-Based Newsletter Automation (Code vs. No-Code)**

**Apr 2025**

*n8n, CrewAI, LangChain, FastAPI, AWS Lambda*

- Designed and deployed **newsletter automation** using **n8n (no-code)** and **CrewAI + LangChain (code-first)** to compare **performance, flexibility, and maintainability** of **agentic workflows**.
- Built **custom APIs** with **FastAPI**, integrated **multi-agent coordination logic**, and deployed **backend services** on **AWS Lambda** for **scalable, event-driven execution**.
- Benchmarked both approaches across **latency, reliability, and dev speed**, achieving **70% reduction in manual workload** with insights into **visual vs. programmatic agent tradeoffs**.

**Pneumonia Detection – Deep Learning for Chest X-ray Classification**

**Dec 2024**

*TensorFlow, VGG19, AWS SageMaker, Flask, OpenCV*

- Built a **pneumonia detection model** using **VGG19** with **custom classifier layers**, leveraging **transfer learning** and **image augmentation** to improve **medical image classification accuracy**.
- Fine-tuned and trained the model on **AWS SageMaker**, reducing **training time by 60%** compared to local GPU setups while scaling to **larger datasets** with improved **validation performance**.
- Deployed the model as a **Flask-based web app** with **real-time inference support** and a **user-friendly front-end** for interactive **diagnosis simulation**.

- Engineered a **multimodal pipeline** combining **Reddit sentiment signals** (via **VADER + virality-based scoring**) and **financial indicators** (OHLCV, VIX) to predict NVDA's next-day returns.
- Trained a **7-day rolling LSTM model** in **Amazon SageMaker**, achieving **measurable correlation** against market baselines while reducing **local experimentation time** by 60%.
- Used **Amazon FinSpace** to manage **historical pricing and sentiment data**, supporting **scalable time-series alignment** and **high-resolution feature aggregation** for deep learning input.

EDUCATION

Lawrence Technological University

Expected Dec 2025

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

Southfield, MI

- **Relevant Coursework:** Intelligent Robotics (ROS), Machine Learning, Artificial Intelligence, Natural Language Processing, Collaborative Research in Agentic AI

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, Deep Learning & Python, Machine Learning Foundations, Internet of Things

EXTRACURRICULAR / ACHIEVEMENTS

- **Selected for Amazon Nova AI Challenge: Trusted AI Track** (2025)
- **Participated in RSNA Pneumonia Detection Challenge; ranked in upper quartile** (2024)
- **Designed "ATOLL" for NSS/NASA Space Settlement Design Competition** (2015)
- **Gold Medalist in Indian National Mathematical Olympiad (INMO)** (2012)