

# Pooja Nigam

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## SUMMARY

Agentic AI Engineer specializing in Python, JavaScript Node.js and AWS deployment. Experienced in building agentic systems, RAG pipelines, AI-driven apps and asynchronous backend services using microservice architecture. Strong in CI/CD automation, API development, and cross-functional collaboration to deliver high-quality, reliable software solutions.

## SKILLS

- **Programming:** Python (FastAPI, Flask, Django, Asyncio, Pydantic), JavaScript (Node.js, React), Java, HTML, CSS
- **Agentic AI & Frameworks:** Agentic AI Orchestration, RAG Pipelines, Prompt Engineering, LangChain, LlamaIndex, Gradio, Streamlit, Cursor, Autonomous Agents, Git, GitHub Actions, Jenkins, Docker, RESTful APIs, GraphQL, Swagger, Postman, Pytest, Power BI
- **Cloud & DevOps:** AWS (ECS, EC2, S3), CI/CD, Microservices Architecture, Nginx, Containerization
- **Database:** Oracle, MySQL, MongoDB, MariaDB, PostgreSQL, Redis, Snowflake
- **Messaging & Async:** RabbitMQ, Asynchronous Programming (Python async/await)
- **Collaboration & Practices:** Cross-functional Communication, System Design, Domain-Driven Design (DDD exposure), Test Strategy, Documentation, Onboarding Support

## PROFESSIONAL EXPERIENCE

### Agentic AI Engineer, Cognowiz, Ashburn, VA (Remote)

Feb 2025 – Present

- Engineered and maintained **APIs** with Python (**FastAPI, Flask**) and JavaScript (**Express.js**) in a **microservice architecture**, integrated customized data pipelines with Power BI, to enhance data processing and visualization.
- Designed a **Streamlit** application with AWS **Lambda** and **Glue** to autonomously trigger regional plan simulations at set intervals, generate Excel outputs, and deliver results via Slack, replacing manual execution and saving ~5 hours weekly.
- Built an **agentic AI chatbot** integrated with a SQL job knowledge base to track critical report statuses, refresh jobs on demand, and auto-distribute summaries 3x/day, reducing manual on-call workload during high-volume events.
- Optimized asynchronous API performance with **Pytest, Postman, and GitHub Actions**, reducing response times in production.
- Authored **technical specs, API documentation, and onboarding guides** to improve knowledge transfer and system maintainability across teams.

### Software Engineer- AI and Backend Systems, Cantonica, NYC, NY (Remote)

Sept 2024 – Jan 2025

- Refactored and maintained frontend components with React/JavaScript (Cloudflare Pages) and built backend services with Python (FastAPI), integrating Redis, MongoDB, and AI-driven features; deployed containerized services on AWS ECS (Docker/ECR) with S3 for static assets.
- Engineered a self-serve agentic AI chatbot enabling program managers to query business data (actuals, plan/revenue comparisons) via natural language, eliminating engineering dependencies and saving ~25 hours weekly; implemented CI/CD pipelines with GitHub Actions to improve release stability and reduce deployment errors.

### Software Developer, WebCraft IT, Arlington, TX

June 2023 - May 2024

- Delivered a full-stack customer feedback system integrated with Salesforce CRM using Python (**FastAPI**), **Node.js** in a microservice architecture; integrated RabbitMQ for async messaging and tested APIs with Pytest.
- Optimized **DynamoDB** queries, reducing query response time by 30%; and migrated key datasets to **PostgreSQL** for data integration.
- Deployed and debugged applications on **AWS ECS** with **Nginx** for load balancing. Managed **CI/CD** using **Jenkins** and leveraging S3 for reliable deployments.

### Full-Stack Developer, Oklahoma State University, Stillwater, OK

Nov 2021 – May 2023

- Implemented a full stack web app using **MERN** stack and **Python**; integrated **CNNs (TensorFlow, OpenCV)** for image recognition, automating plant disease detection.
- Leveraged **GANs** to augment datasets, improving insecticide treatment accuracy by 25%; designed an MVC architecture with **RESTful APIs**, reducing data processing time.

### Software Developer, UnitedHealth Group (Cognizant), Pune

Aug 2019 – July 2021

- Developed Clinical Data Management and Appointment Scheduling Modules for the EMR System using Python (**Django**), Node.js, and React, improving EMR functionality and patient management efficiency.
- Implemented **asynchronous Node.js with RabbitMQ** to reduce appointment booking delays by 30%
- **Deployed and debugged** Docker-based **microservices** with (**RESTful APIs/GraphQL**) on **AWS EC2**; configured **Nginx** for load balancing and scalability.
- Integrated the **Random Forest** model to improve patient risk assessments, improving diagnostic accuracy and patient care efficiency.

### Asst. Software Engineer, Gig India, Pune

July 2017 – July 2019

- Assisted in **Java**-based user authentication and order processing, optimizing **MySQL** schemas to improve system performance and user satisfaction.

## EDUCATION

M.S., Computer Science – Oklahoma State University, Stillwater, OK

B.E., Information Technology – Savitribai Phule Pune University

Graduated: May 2024

Graduated: July 2019