

# ASHUTOSH CHOUDHARI

4ashutosh98@gmail.com • (412) 626-9743 • [LinkedIn](#) • [GitHub](#) • [Portfolio](#) • Pittsburgh, PA

## EDUCATION

**CARNEGIE MELLON UNIVERSITY**, Pittsburgh, PA

**Aug 2022 - Dec 2024**

**Master of Information Systems Management**

**CGPA: 3.78/4.00**

Relevant Coursework: Computational Data Science, Unstructured Data Analytics, Time Series Forecasting, Data Structures

**VELLORE INSTITUTE OF TECHNOLOGY**, Vellore, India

**Jul 2016 - Jun 2020**

**Bachelor of Technology - Electronics and Instrumentation Eng** (Minor in Computer Science and Eng)

**CGPA: 3.94/4.00**

Relevant courses: Database Management systems, Neural networks, Python programming, Statistics, Operating Systems

## PROFESSIONAL EXPERIENCE

**Confimed LLC**

Pittsburgh, PA

**Software Developer**

**Jan 2025 – Present**

- Led development of a React-based agentic chatbot with LangChain.js and OpenAI function-calling, enforcing JSON schemas to guide multi-step workflows cutting task time by 25% and boosting adoption 30%
- Integrated streaming agent pipelines over WebSockets in a JS frontend with Mixpanel analytics for input validation and flow control reducing support tickets 40% and lifting engagement 35%.

**Nexteer Automotive**

Pittsburgh, PA

**Machine Learning Engineer**

**Aug 2024 – Dec 2024**

- Created document comparison application to extract, compare, and analyze PDF documents using Azure AI Document Intelligence, Adobe PDF Extract API and OpenAI's GPT-4o, enhancing document management efficiency and saving 2 FTEs.
- Implemented user-friendly Streamlit GUI with a robust backend data handling system leveraging MongoDB for persistent caching, to minimize API call costs and improve processing speed by 5 times.

**MedSarthi LLC**

Phoenix, AZ

**Data Scientist**

**Jun 2023 - Aug 2023**

- Built Flask REST API backend with weighted recommendation algorithms and A/B testing endpoints, integrated OpenAI GPT-3.5-turbo for AI-driven suggestions—raised residency match rates 14% and cut API latency 30% across 1,000+ monthly users.
- Developed a responsive React frontend with reusable components, deployed the full-stack app to Heroku with PostgreSQL, and set up CI/CD with automated tests—halving release cycles, ensuring 99.9% uptime, and supporting 500+ daily sessions.

**Deloitte USI**

Hyderabad, India

**Solution Delivery Analyst**

**Jun 2021 - Jul 2022**

- Engineered advanced log analysis workflows using data from SIEM tools (Splunk, QRadar), EDRs, and OSINT tools identifying and mitigating suspicious activities across system, network, and endpoint logs.
- Generated over 100 detailed incident reports weekly, applying pattern recognition, anomaly detection, and OSINT tools to deliver actionable insights, driving a 32% reduction in security incidents through data-driven strategies.

## ACADEMIC PROJECTS

**Search Engine LLM** (*LangChain, Groq, HuggingFace, Streamlit, Ollama, GitHub Actions*)

**Jan 2025 – Feb 2025**

- Developed an AI agent-powered search chatbot using Llama3 LLM with LangChain, Groq, and HuggingFace, integrating Arxiv, Wikipedia, and DuckDuckGo search tools to fetch information, handling multi-hop queries with up to 3 external sources.
- Deployed the application on Hugging Face Spaces with CI/CD automation via GitHub Actions, reducing deployment time by 40%. Implemented context retention for up to 5 user interactions, improving conversational coherence and response accuracy.

**Blog Generation using AI** (*AWS Bedrock, Lambda, S3, Cloudwatch, API Gateway, Streamlit, GitHub Actions*)

**Dec 2024 – Jan 2025**

- Built a serverless AI-powered blog generator using AWS Lambda, Bedrock AI, and Streamlit, reducing manual content creation time by 80%. Integrated API Gateway, S3, and CloudWatch for scalable storage and monitoring.
- Automated CI/CD pipeline with GitHub Actions, cutting deployment time by 50%. Configured IAM roles for secure AWS access and deployed on Streamlit Cloud, enabling real-time blog generation with sub-second latency.

**Network Security Phishing Detection System** (*MongoDB, MLflow, AWS ECR, EC2, Docker, FastAPI, CI/CD*)

**Aug 2024 – Nov 2025**

- Developed a machine learning pipeline for phishing detection using 7 tuned classification algorithms and achieving 96% F1-score and 97% precision with the best-performing model (XGBoost), representing a 15% improvement over baseline models.
- Architected scalable MLOps infrastructure with FastAPI microservices, GitHub Actions CI/CD, AWS ECR containerization, and MLflow experiment tracking, reducing deployment cycles by 78% while maintaining 99.2% system availability.

## SKILLS

**Programming languages:** Python, Java, Oracle SQL, R, JavaScript

**Frameworks / Libraries:** PyTorch, Tensorflow, NLTK, Hugging Face, Scikit-learn, numpy, pandas, XGBoost, flask, LangChain

**Tools:** Tableau, Jira, GitHub, Docker, MongoDB, Neo4j, FAISS, Chroma, Ollama, Sqlite, Nvidia NIM

**Certifications:** AWS Certified Cloud Practitioner, Cert. of Cloud Security Knowledge, Agile Product Owner, Agile Scrum Master

**Cloud tools:** AWS Bedrock, SageMaker, Lambda, S3, API Gateway, Azure ML studio, Vertex AI