

ASHUTOSH CHOUDHARI

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

EDUCATION

CARNEGIE MELLON UNIVERSITY , Pittsburgh, PA Master of Information Systems Management Coursework: Computational Data Science, Unstructured Data Analytics, Time Series Forecasting, Data Structures and Algorithms	Aug 2022 - Dec 2024 CGPA: 3.78/4.00
VELLORE INSTITUTE OF TECHNOLOGY , Vellore, India Bachelor of Technology - Electronics and Instrumentation Eng (Minor in Computer Science and Eng) Coursework: Database Management systems, Neural networks, Python programming, Statistics, Operating Systems	Jul 2016 - Jun 2020 CGPA: 3.94/4.00

PROFESSIONAL EXPERIENCE

AI/ML Engineer, Pyramyd (Remote)	Jun 2025 - Present
<ul style="list-style-type: none">Designed a transformer-based ML model in PyTorch to predict ratings for software product reviews achieving 87% accuracy.Developed AI-powered RFP Requirements Extractor using o4-mini LLM and Azure AI Search, implementing parallel processing architecture to extract, categorize requirements from proposal documents with 90%+ accuracy across documents.Optimized performance for 5x concurrent processing with vector search for intelligent document cross-referencing.	
Software Developer, Confirmed LLC (Pittsburgh, PA)	Feb 2025 - Sep 2025
<ul style="list-style-type: none">Developed microservice using LangChain, FastAPI, Azure Container Apps for nametag scanning, achieving 92% accuracy.Integrated Python service with .NET backend via REST APIs, optimized SQL query performance by 43% through NL-to-SQL.Built CI/CD pipeline in Azure DevOps with pytest testing and Docker deployment; reduced deployment time by 70%.	
Machine Learning Engineer (Student Consultant), Nexteer Automotive (Remote)	Aug 2024 - Dec 2024
<ul style="list-style-type: none">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.	
Data Science Intern, MedSarthi LLC (Remote)	Jun 2023 - Aug 2023
<ul style="list-style-type: none">Developed an A/B tested, regression-weighted recommendation engine, increasing residency acceptance by 14%.Built a full-stack web app (GPT-4, React, Flask, PostgreSQL, Heroku) for streamlined service delivery and advanced analytics.	
Solution Delivery Analyst, Deloitte (Hyderabad, India)	Jun 2021 - Jul 2022
<ul style="list-style-type: none">Developed a Python-based IOC triage tool to process 500+ IPs, domains, URLs, and emails daily, classifying inputs, and integrating OSINT APIs (VirusTotal, WHOIS, AbuseIPDB), reducing average query time by 65% with parallel execution.Architected a Flask REST backend with PostgreSQL and Redis, exposing endpoints for IOC normalization, rate-limit handling, and API key management, enabling multi-user scalability and cutting redundant OSINT calls by 40%.Built a React-based frontend with secure API integration to provide dashboards, results tables, and export workflows (Markdown/PDF/CSV), ensuring consistent and auditable threat intelligence reporting across environments.	

ACADEMIC PROJECTS

Network Security Phishing Detection System (<i>MongoDB, MLflow, AWS ECR, EC2, Docker, FastAPI</i>)	Jan 2025 - Mar 2025
<ul style="list-style-type: none">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.Engineered an MLOps solution with CI/CD pipeline using GitHub Actions, AWS ECR containerization, and MLflow for experiment tracking, reducing deployment time by 78% and enabling real-time phishing detection with 99.2% uptime.	
CGM Systems Analysis and Improvement Recommendations (<i>NLTK, Scikit Learn, genism, matplotlib</i>)	Aug 2023 - Dec 2023
<ul style="list-style-type: none">Analyzed 40,000+ social media posts about CGM systems using LDA topic modeling (0.78 coherence score) and VADER sentiment analysis (89% accuracy), identifying 5 key discussion topics per brand and user sentiment patterns.Extracted actionable insights by segmenting user sentiment across product features, revealing critical pain points around insurance coverage (37% negative) and app functionality (28% negative), informing strategic product improvement recommendations.	
Question-Answering System Development (<i>Azure Machine Learning, PyTorch, nltk, spaCy, Transformers</i>)	Sep 2023 - Nov 2023
<ul style="list-style-type: none">Fine-tuned a pre-trained BERT model for question-answering tasks, achieving 68% accuracy on the SQuAD test set, a 28% improvement over the pre-trained model.Deployed the fine-tuned BERT model as a scalable cloud-based question-answering service on Azure Container Instances (ACI), leveraging Azure ML for deployment, achieving efficient inference on unseen data.	

SKILLS

Programming languages: Python, Java, SQL, R, JavaScript, HTML, CSS
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 AI Foundry, GCP Vertex AI, BigQuery