

Chaitanya Chaudhari

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EDUCATION

George Mason University

Fairfax, VA

Master of Science in Computer Science GPA: 3.83/4

Aug 2024 – Expected May 2026

Relevant Coursework: Artificial Intelligence, Cloud Computing, Network Security

Savitribai Phule Pune University

Pune, India

Bachelor of Engineering in Computer Engineering

May 2020 – Jun 2024

EXPERIENCE

Software Development Intern

Jan 2023 – Mar 2023

Cognifront Software Pvt. Ltd

- Converted complex business requirements into precise, quantifiable backend optimization strategies using Python and SQL, improving system responsiveness by 30% through advanced data preprocessing and query optimization..
- Cut backend latency by 20% by redesigning distributed deployment pipelines using Docker and CI/CD, enabling smooth handling of thousands of concurrent requests.
- Partnered with cross-functional teams to refine system architecture, improving real-time data processing throughput by 15% for high-volume workloads.
- Optimized database performance by redesigning indexing strategies and query execution plans, reducing average response times by 40% across high-traffic modules and ensuring scalability for thousands of records.

PROJECTS

Distributed LLM-Powered Product Recommendation Engine | Python, PyTorch

Aug 2025 – Present

- Developed and fine-tuned large language models (LLMs) using PyTorch and Hugging Face for a product recommendation engine, leveraging domain-specific datasets and custom training pipelines to boost accuracy.
- Achieved 25% improvement in recommendation accuracy through pre-training and fine-tuning techniques on small dataset.

High-Performance News Analytics Platform | Python, newspaper3k, MarianMT

Jun 2025 – Jul 2025

- Pioneered NLP microservices for multilingual news fact-checking using newspaper3k, Hugging Face's MarianMT, and Chroma, achieving 85% claim verification accuracy and reducing false information spread by 15%.
- Deployed containerized enterprise-grade Streamlit application with Docker for real-time analysis of large-scale datasets, implementing zero-shot classification models with 80% accuracy

F1 Machine Learning Prediction Engine | Python, Scikit-learn, FastF1, SHAP

Apr 2025 – May 2025

- Built high-accuracy Gradient Boosting model with Scikit-learn and FastF1 to predict Formula 1 winners, achieving Mean Absolute Error of 0.45 seconds and boosting prediction accuracy by 15% through enhanced preprocessing.
- Analyzed large-scale telemetry datasets using Python pandas and scikit-learn for anomaly detection, demonstrating statistical analysis skills applicable to security event correlation and threat detection

High-Availability NGINX Cluster on AWS EC2 | AWS EC2, VPC

Feb 2025 – Mar 2025

- Created enterprise-grade NGINX web server cluster using Kubernetes and Docker containers on AWS EC2, configuring Virtual IP across multiple Availability Zones to achieve 99.9% uptime.
- Implemented automated failover with Keepalived, cutting potential downtime in half during simulated outages..

Secure Data Stream Integrity Checker | C++, OpenSSL

Feb 2025 – Feb 2025

- Developed a real-time anomaly detection system for high-volume sensor data streams, slashing false-positive rates by 22% via innovative adaptive threshold algorithms in C++ and OpenSSL.
- Integrated checksum verification and cryptographic hashing to safeguard distributed system data flows.

TECHNICAL SKILLS & COMMUNITY ENGAGEMENT

Programming Languages: Python, C, C++, Java, Scala, SQL, JavaScript, Go, R

Cloud Infrastructure: AWS (EC2, S3, RDS), Azure, Docker, Kubernetes, Terraform, Jenkins, GitHub Actions

Databases: MySQL, PostgreSQL, Redis, DynamoDB

AI/ML: PyTorch, Scikit-learn, Hugging Face, PySpark, NLP, Model Optimization

Certifications: AWS ML Foundations, AWS Cloud Foundations, Building LLM Applications With Prompt Engineering

Published technical articles on Medium sharing expertise in ML Engineering, Distributed Systems.

Led 5+ Rotaract Club events for 200+ participants, strengthening leadership and teamwork skills.