Allen George Ajith

+1 347-458-5400 | allen.ajith@nyu.edu | linkedin.com/allen-g | allen-ajith.github.io

Education

New York University, Courant Institute of Mathematical Sciences 2024 – 2026
MS in Computer Science *New York, NY*
Relevant Courses: Deep Learning (Prof. Yann LeCun), Natural Language Understanding and Computational Semantics (Prof. Tal Linzen), Computer Vision for Science and Engineering (Prof. David Fouhey)

Cochin University of Science and Technology 2019 – 2023
B.Tech. in Computer Science and Engineering ***GPA: 9.24/10*** *Kerala, India*
Relevant Courses: Machine Learning, Algorithms & Data Structures, Linear Algebra & Calculus II, Operating Systems

Skills

Languages: Python, SQL, C++ **ML/AI**: PyTorch, TensorFlow, scikit-learn, HuggingFace Transformers, LangChain
Tools & Platforms: GCP, Docker, Kubernetes, BigQuery, PostgreSQL, pandas, FastAPI, Git, FedML

Experience

Machine Learning Intern Jun. 2025 – Aug. 2025
ERAAS Health *Hoboken, NJ*
- Designed and engineered a heat-health risk prediction system with **≈ 90%+** accuracy using BigQuery ML, scikit-learn, and Google Cloud AutoML on **100K+** patient records, integrating CDC Heat-Health Index and weather data to enable proactive intervention strategies.
- Developed a proof-of-concept voice agent infrastructure to enable automated patient outreach before extreme weather emergencies, featuring LLM guardrails, multi-provider TTS, and asynchronous processing.

Research Assistant Aug. 2024 – Present
NYU, Courant Institute of Mathematical Sciences *New York, NY*
- Building ensemble forex trading systems combining deep learning models with LLM-based signal extraction for emerging market FX prediction under Dr. Dennis E. Shasha. Implementing fine-tuning, knowledge distillation, prompt engineering, and temporal signal decay analysis to optimize news-to-signal timing.

AI Research Intern Jun. 2022 – Dec. 2022
Hitachi Solutions India *Chennai, India*
- Implemented cross-silo federated learning using FedML framework with modified FedAvg algorithm, epsilon differential privacy, and 8-bit gradient quantization, achieving **12.7%** faster convergence over baseline.

Selected Publications

Ajith, A. G. et al., Exploratory Analysis of Link Prediction and Sampling of Social Networks Jul. 2023
International Conference on Green Energy, Computing and Intelligent Technology

Projects

Blockchain E-Tender System | *Solidity, Circom, Javascript* Dec. 2022 – Mar. 2023
- Architected a decentralized Sealed Bid Tender system on Polygon Network using Zero Knowledge Proof circuits and Solidity smart contracts, featuring automated winner selection and real-time bid tracking user interface.

CMLFormer | *PyTorch, HuggingFace Transformers* Jan. 2025 – May 2025
- Co-developed a dual-decoder Transformer with synchronized cross-attention for code-mixed Hinglish text, implementing novel pretraining objectives.

Certifications

Google Cloud Skills Badges: Data Engineering, DevOps, Machine Learning
Toastmaster's International: Competent Communicator, Competent Leader

Leadership and Volunteering

Google Developer Students Club, CUSAT | *Team Lead* May 2021 – Jul. 2022
- Guided a community of **200+** students, organizing weekly technical workshops, hackathons, and mentorship programs in web development, ML, and cloud computing.