# 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, BigQuery ML, LangChain
**Tools & Platforms**: GCP, Docker, Kubernetes, BigQuery, PostgreSQL, pandas, FastAPI, Git, FedML

## Experience

**Machine Learning Intern** Jun. 2025 – Aug. 2025
*ERAAS Health* *Hoboken, NJ*
- Engineered heat-health risk prediction system with **91.4%** 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 proof-of-concept for 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.