

Allen George Ajith

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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

Programming & Frameworks: Python, PyTorch, TensorFlow, scikit-learn, HuggingFace Transformers, C++, SQL
Tools & Platforms: Docker, Kubernetes, GCP, Azure, FedML, Git, NumPy, pandas, FastAPI

EXPERIENCE

Research Assistant

Aug. 2024 – Present

NYU, Courant Institute of Mathematical Sciences

New York, NY

- Building a multi-model forex trading system integrating BiLSTM-Attention, N-BEATS, TCN, and Transformer models with Kelly Criterion risk management under [Dr. Dennis E. Shasha](#).
- Implemented LLM sentiment analysis pipeline with PEFT fine-tuning and LoRA optimization for real-time signal generation from financial news.

AI Intern

Jun. 2022 – Dec. 2022

Hitachi Solutions India Pvt. Ltd.

Chennai, India

- Built simulated cross-silo federated learning systems using FedML, achieving **12.7%** faster convergence through hybrid FedAvg algorithms and Epsilon Differential Privacy, with **95.8%** accuracy retention.
- Designed and evaluated privacy-preserving model training across organizational silos using 8-bit gradient quantization and SHA-256 encrypted parameter sharing.

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 on annotated HingCorpus Dataset and achieving **73%** relative F1 improvement over BERT on HASOC-2021.

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. Established project-based learning tracks, peer programming initiatives, and industry connect events, resulting in **30%** increase in student participation.

CERTIFICATIONS

Google Cloud Skills Badges: Data Engineering, DevOps, Machine Learning

Toastmaster's International: Competent Communicator, Competent Leader