

# 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 (by [Prof. Yann LeCun](#)), Natural Language Understanding and Computational Semantics (by [Prof. Tal Linzen](#)), Computer Vision for Science and Engineering

### 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, Hugging Face, C++, SQL, Solidity

**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*

- Working with [Dr. Dennis E. Shasha](#) and research group to design a multi-model FX trading system using Bidirectional LSTM with Attention, N-BEATS and Temporal Convolutional Networks.
- Integrated market-moving signals extracted from financial news using large language models (LLMs), applying parameter-efficient fine-tuning (PEFT), knowledge distillation, and low-rank adaptation (LoRA) for real-time inference; currently exploring regime-aware signal weighting with Bayesian model averaging.

### AI Intern

Jun. 2022 – Dec. 2022

*Hitachi Solutions India Pvt. Ltd.*

*Chennai, India*

- Built a simulated cross-silo federated learning system 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

*The 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.

### Speech2Emotion | Python, Flask, TensorFlow

Jan. 2022 – Apr. 2022

- Engineered an end-to-end emotion classification system with custom CNN architecture and MFCC feature extraction, achieving **11%** accuracy improvement over VGG-16 baseline.

## 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:** Data Engineering, DevOps, Machine Learning

**Toastmaster's International:** Competent Communicator, Competent Leader