

Akhilesh Mohanasundaram

+91-908-034-7945 | akhileshmohan2005@gmail.com | [linkedin.com/in/Akhilesh-Mohanasundaram](https://www.linkedin.com/in/Akhilesh-Mohanasundaram) | github.com/Akhilesh-Mohanasundaram | Portfolio

EXECUTIVE SUMMARY

AI-focused Computer Science undergraduate with production experience building LLM architectures, deep learning systems, and knowledge graph RAG pipelines across industry and research internships. IEEE-published author and hackathon winner with a track record of delivering quantified, real-world AI solutions using Python, PyTorch, and cloud-native tools.

EDUCATION

Amrita Vishwa Vidyapeetham

B.Tech in Computer Science and Engineering (Artificial Intelligence) — **CGPA: 9.34 / 10.0**

Coimbatore, India

2023 – Present

CS Academy

Higher Secondary Certificate (HSC – AISSCE) — **95.6%**

Coimbatore, India

2022 – 2023

EXPERIENCE

AI Engineer Intern

Gadgeon Systems Inc.

Remote

Jan 2026 – Mar 2026

- Engineered production-ready LLM architectures by translating complex domain requirements into deployable AI systems, contributing directly to client-facing AI workflows.
- Designed and optimized multi-step agentic pipelines, improving reliability and response quality for real-world enterprise problem statements.

Summer Research Intern

Indian Institute of Technology (IIT) Kharagpur

Kharagpur, India

May 2025 – Jul 2025

- Designed a secure communication system using TCP and hybrid cryptography (RSA + AES) on Raspberry Pi devices over LoRa networks, enabling robust low-power IoT communication.
- Built a Wi-Fi-LoRa gateway architecture to facilitate encrypted client-server data exchange, demonstrating distributed systems and network security expertise.

UI/UX Design Intern

LearningX

Remote

Dec 2024 – Feb 2025

- Designed the user interface for Club Chat, a club management mobile application, with a focus on creating intuitive and engaging user experiences.

PROJECTS

Probabilistic Quantitative Trading System & Backtesting Engine | Python, PyTorch, Pandas, NumPy [\[GitHub ↗\]](#)

- Architected a Transformer + Mixture-of-Experts model with Student-t distributions for heavy-tailed financial returns; built a production-grade backtesting engine with transaction cost modeling, volatility scaling, and walk-forward validation to eliminate look-ahead bias.
- Achieved **Sharpe Ratio of 1.23** and **25.04% annualized CAGR** in out-of-sample testing, outperforming SPY benchmark (Sharpe: 0.71, CAGR: 15.52%) via optimized cross-sectional ranking.

GraphRAG Agent — Knowledge Graph RAG System | Python, Neo4j, FastAPI, LlamaIndex, Docker [\[GitHub ↗\]](#)

- Designed an autonomous RAG pipeline that dynamically scrapes the web, extracts structured entities/relationships, and builds a web-scale knowledge graph using Neo4j and Google Gemini 2.0.
- Enabled context-aware Q&A by retrieving connected sub-graphs over isolated text chunks, significantly improving answer accuracy and explainability at scale.

ACHIEVEMENTS

IEEE RECCAP 2026 – Conference Paper Presentation | Presented research work on integrating Wavelet Scattering Transform (WST) and deep learning for EEG-based depression classification at IEEE RECCAP 2026, held at IIT Palakkad.

May 2026

Winner – LaunchHacks IV | Built PCOSense, an AI health companion with LLM-based personalized care, knowledge graph food analysis, and yoga pose matching.

Jun 2025

Top 100 Global Finalist – IBM TechXchange Hackathon 2024 | Earned a fully sponsored pass to IBM TechXchange Conference in Las Vegas out of thousands of global participants.

Oct 2024

NPTEL Elite + Gold – IoT (Top 2% Nationally) | Secured Course Topper rank with 92% final score across all national performers.

Nov 2024

CERTIFICATIONS

Data Science and Data Analytics | Teachnook

Sep 2023 – Oct 2023

Introduction to Quantum Computing: Quantum Algorithms and Qiskit | NPTEL

Jul 2024 – Aug 2024

Google Cloud Computing Foundations | Google Cloud

Jul 2025 – Aug 2025

SKILLS

Languages: Python, C++, Java, SQL

AI / ML: PyTorch, Scikit-learn, LangChain, LlamaIndex, Transformers

Systems & Cloud: FastAPI, Docker, Google Cloud, AWS

Databases & Tools: Neo4j, PostgreSQL, Git/GitHub

Functional/Behavioral: Project Management, Leadership, Critical Thinking, Problem-Solving, Communication