

ADHITHYA LAXMAN R G

adhithyarg26@gmail.com | +41796544680 | Sonneggstrasse, 17, Zurich

[Linkedin](#) | [GitHub](#) | [Portfolio](#)

EDUCATION

ETH Zrich

MSc in Data Science

Zrich, Switzerland

Sep 2025 - Sep 2027

Coimbatore Institute of Technology (Affiliated to Anna University)

B.E. Computer Science and Engineering

CGPA: 9.57 (Top 1% of the class)

Coimbatore, India

Nov 2021 - May 2025

IIT Madras

Diploma in Data Science & Applications (Online)

CGPA: 8.49

Chennai, India

Jan 2022 - Aug 2025

EXPERIENCE

Caterpillar Inc. | Software Engineer Intern

Chennai | Jan 2025 - Jul 2025

- Developed and trained **monocular depth estimation models** in PyTorch for autonomous trucks, deployed on **TI AM69A edge AI hardware** for real-time perception.
- Optimized inference pipelines in gstreamer for resource-constrained, camera-only systems, reducing latency and improving reliability.
- Applied **MLOps practices** (Git, Docker, Azure DevOps) to automate training, deployment, and ensure reusability.

Akamai Technologies | Software Engineer Summer Intern

Bangalore | Jun 2024 - Aug 2024

- Built automated **ETL pipelines** using Jenkins and Docker to process large-scale data from Hive clusters. Integrated **ClickHouse database** with **Grafana dashboards** for real-time KPI visualization and monitoring.
- Modernized infrastructure and enabled real-time visualization in Grafana, improving monitoring efficiency.

Samsung R&D Institute | Research Intern (Samsung PRISM)

Aug 2023 - Mar 2024

- Led a team of 5 in development of **Conditional GAN models** in TensorFlow to generate MNIST-based video sequences, improving accuracy by 15% with **custom pix2pix loss functions**.
- Achieved **SSIM 0.97** while reducing manual intervention. Implemented **MLOps workflows** (Git, Docker, TensorFlow) to ensure reproducible and efficient model training and deployment.

SKILLS

Languages & Databases:	Python, C, C++, Java, SQL, MongoDB, PostgreSQL, Shell Script, AWS S3, ClickHouse DB, HDFS, MapReduce, Hive
Frameworks:	PyTorch, TensorFlow, ONNX, Flask, Vue.js, Django, gstreamer
Tools / Platforms:	Git, Docker, Jenkins, Linux, Grafana, Maven, Azure DevOps, Jira, Ansible
Focus Areas:	Algorithms, Deep Learning, Machine Learning, DevOps, Distributed Systems

PROJECTS / OPEN-SOURCE

Federated IDS with Deep Belief Networks | [Link](#)

- PyTorch, Python, Go, gRPC, FedAvg, Deep Belief Networks (RBM-pretrained), FNN**
- Led a team of 5 to build privacy-preserving WiFi intrusion detection on **heterogeneous WiFi networks** using a federated **DBN**, leveraging federated learning to detect **previously unknown errors at local networks** via a globally trained model while **preserving data privacy**.
- Designed a robust, cross-language **Go/Python** RPC architecture to distribute and aggregate model parameters to get 98% accuracy, supporting client authentication and automated environment configuration.

PDF Chatbot using Retrieval-Augmented Generation | [Link](#)

- Python, Flask, RAG architecture, Google Generative AI Embeddings, Chroma, SQLite**
- Built an LLM-powered chatbot to answer questions, generate summaries, flashcards, and quiz questions from PDF documents using **RAG (Retrieval-Augmented Generation)**, enabling semantic search over document embeddings.
- Developed an end-to-end pipeline including PDF parsing (**PyPDFLoader**), text embedding, vector database management, and response generation with a Google LLM, along with a Flask web interface supporting multiple interaction modes.

HONORS & AWARDS

- Accepted paper at Springer 2025: FEDDBN-IDS Federated Deep Belief Network for Intrusion Detection
- Winner, **Internal Smart India Hackathon 2023** (1st/16 teams); 2nd place **Innovision24 Hackathon** (2nd/48 teams)
- "**A. John Wilson Endowment Prize**" for first mark in **Mathematics** across departments
- Leetcode Knight** Top 2.5% Globally (Rating 2020+)
- Awarded "Excellence Certificate" for performance and complex problem solving in Samsung PRISM internship