

Md Fayaz Ahamed, Ph.D.

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[Website](#) — [Github](#) — [LinkedIn](#)

Education

University of Memphis, Memphis, TN

Ph.D. in Mathematics (12/2024)

CGPA: 3.82

University of Memphis, Memphis, TN

M.Sc. in Applied Mathematics (05/2021)

CGPA: 3.82

Lappeenranta University of Technology, Lappeenranta, Finland

M.Sc. in Computational Engineering (05/2015)

CGPA: 4.13

Experience

Meta (via TELUS International AI Inc., Las Vegas, Nevada)

01/2025 – 02/2025

AI Data Annotator – Pilot Project (LLM Training)

- Train Large Language Models (LLMs) by creating unique and complex mathematical prompt-response pairs to enhance AI reasoning capabilities.
- Contribute to the development of high-quality datasets to improve mathematical problem solving in AI models.

University of Memphis, Memphis, TN

09/2018 - 07/2024

Graduate Assistant

- Contributed significantly to the research project titled "*Uniform stability of Von Karman plate with rotational inertia and well-posedness of regularized long wave equation*", actively participating in various aspects such as conducting research, data collection, analysis, and mathematical model development.
- Collaborated with a research team on projects involving statistical and mathematical modeling, simulation, mathematical optimization, and numerical analysis.
- Provided instruction and support to students at the Math Learning Center (MLC) by teaching undergraduate-level Mathematics and Statistics courses. Served as the instructor for the undergraduate-level math course Calculus III during the summer of 2020, delivering lectures and facilitating learning activities to enhance students' understanding and engagement.

Skills

Languages: Python, SQL, R, MATLAB, Mathematica

LLM & GenAI: Hugging Face, LangChain, Prompt Engineering, Embeddings, RAG, Fine-tune, Transformers, BERT

Frameworks & Libraries: NumPy, Pandas, Scikit-learn, Matplotlib, Seaborn, TensorFlow, Keras, PySpark

Tools & Platforms: AWS (basic), Tableau, MS Excel, MySQL, SQLite, VS Code, Jupyter, Google Colab, GitHub

Selected Projects

Medical GenAI Chatbot for Diabetes Management (LangChain, Gemini, RAG, FAISS, Streamlit) — [Github Link](#)

Built a RAG-based chatbot using LangChain, Gemini API, and FAISS to answer diabetes-related questions from uploaded PDFs. Designed with Streamlit UI and multiple prompt styles for structured and few-shot responses.

Machine Learning Project for Stroke Prediction (Logistic Regression, Random Forest, ANN) — [Github Link](#)

Built a stroke prediction model analyzing medical data to improve early detection of stroke risks.

Black Friday Sales Prediction (Linear Regression, Decision Trees, XGBoost) — [Github Link](#)

Developed a predictive sales model using Linear Regression, Decision Trees, and XGBoost.

Credit Card Fraud Detection (Random Forest, Isolation Forest, ANN) — [Github Link](#)

Designed a fraud detection system using machine learning to identify fraudulent transactions.

Machine Learning project for Traffic Sign Classification(CNN, Tensorflow, Keras) — [Github Link](#)

Convolutional Neural Network(CNN) is used to build train and test a traffic sign classification model by using Tensorflow and Keras. It is a multi-class classification problem and can be used to make smarter cars.