

EDUCATION

National Institute of Technology, Calicut
Bachelor of Technology

Kerala, India
August 2019 - May 2023

SKILLS SUMMARY

- **Programming:** Python, SQL
- **Machine Learning:** Scikit-Learn, Regression, Classification, Clustering, Feature Engineering, Model Evaluation
- **Deep Learning:** TensorFlow, CNNs, ANNs, Transfer Learning
- **NLP & LLMs:** LangChain, Llama, RAG, Tokenization, Transformers, ChromaDB, Vector Search, Prompt Engineering & Evaluation
- **Tools & Cloud:** Power BI, Excel, MySQL, Git, Jupyter, VS Code, PyCharm, AWS
- **Frameworks/Libraries:** NumPy, Pandas, Matplotlib, Streamlit, FastAPI
- **Soft Skills:** Stakeholder management, Structured communication, Documentation

WORK EXPERIENCE

Data Science Intern | Luminar Technolab | [LINK](#)

December 23- July 24

- Conducted exploratory data analysis and visualization using **Pandas**, **NumPy**, **Matplotlib**, and **Power BI**, uncovering insights that improved project decision-making speed by **25%**.
- Developed and trained ML models (classification, regression, clustering) using **Scikit-Learn**, improving baseline model performance by **20–40%** depending on dataset.
- Built deep learning prototypes with **TensorFlow**, including CNN-based image classifiers and ANN models.
- Improved data preprocessing workflows by creating modular Python scripts, reducing cleanup time by **60%**.

PROJECTS

Intelligent RAG Documentation Assistant | [LINK](#)

- Engineered a production-ready **RAG chatbot** using **LangChain**, Ollama (Llama 3.2), and **FAISS**, automating technical documentation retrieval with conversational AI and source citation tracking..
- **Implemented dual embedding architecture** with **HuggingFace** (all-MiniLM-L6-v2) and OpenAI models, achieving 100% cost reduction through local inference while processing 45+ document chunks.
- Created a Streamlit interface with conversational memory and multi-format document ingestion (PDF/Markdown/TXT), reducing information lookup time by 80%.
- Designed a **cost-optimized GenAI solution** leveraging **open-source models and local LLM inference**, eliminating cloud dependency and reducing operational cost to **\$0/month** compared to API-based alternatives.

Cold Email Generator | [LINK](#)

- Created an AI-powered cold email generation system using **LangChain**, **Llama**, and **RAG**, automating job scraping, portfolio retrieval, and personalized email drafting.
- Implemented a **vector search workflow using ChromaDB** enabling <150ms retrieval speed for personalized context.
- Built a **Streamlit interface** with modular LLM pipelines, reducing manual email creation time by **90%**.
- Designed extensible prompts and parameter tuning (tone, length, style), increasing relevance score by **35%**.

Prediction of Subject Based on Question | [LINK](#)

- Engineered an NLP classification pipeline (tokenization, cleaning, stemming, stopword removal) improving F1 score by **30%**.
- Applied **TF-IDF vectorization** and optimized hyperparameters via grid search, achieving a **10% accuracy boost**.
- Reduced model inference time by **40%** through dimensionality reduction and caching strategies

CERTIFICATES

IBM Python for Data Science| [CERTIFICATE](#)

March 2024

- Mastered fundamental Python syntax, proficiently utilizing control flow, loops, functions, and data structures.
- Strengthened understanding of data preparation, model evaluation, and AI engineering workflows to improve practical implementation skills.

Machine Learning and Data Science Bootcamp| [CERTIFICATE](#)

September 2023

- Enhanced proficiency in collecting and preprocessing raw datasets to prepare them for effective machine learning analysis.
- Studied the modern data ecosystem, including ETL pipelines, data management concepts, and foundational analytics practices.