RIYAJ MUHAMMAD

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EDUCATION

Bachelors of Technology in Biotechnology engineering,
National Institute of Technology (NIT), Raipur   **May 2021**

EXPERIENCE

Research Engineer (ML)   **November 2021- Present**
Genpro Research (Catalyst Research), Trivandrum, India
- **Led ML research** of end to end microservices for semi-automated medical document authoring platform <u>MaiA</u> and develop POCs for client display. Major pharmaceutical and biotechnology companies uses platform, achieving 70% time reduction.
- Conceptualized and developed a project for US based client to automate SDS Time & Event sheet extraction from a **Neo4j knowledge graph,** resulting an impressive **0.75 F1 score**.
- Designed and build microservices for **summarization ,paraphrasing and document filtering**(**0.82 ROC AUC score**) using **Azure translation API, GPT3, LLama v2, Bert, DebertaV3** and **Zephyr 7b beta**.
- Created custom **data collection** pipeline for each micro-service. These micro-services **increases productivity around 60%**.
- Created summarization pipeline for tables boosted **productivity by 50%**.
- Conducted in-house upskilling sessions on **ML, NLP and NLG** techniques to enhance awareness and minimize communication gap on ML technologies within team reduced meeting time by 40%.
- Deployed in-house **GGUF** and **GPTQ** quantized language models **LLMs** on **Azure GPU** and **CPU** servers. Successfully replaced **OpenAI ,**achieved **80% cost reduction**.

Data Science Intern   **August 2021- November 2021**
Verse Innovation , Bangalore, India
- Participated in internal training sessions focused on diverse Machine Learning and Natural language processing techniques.
- Collaborated in content classification pipeline.

COMPETITIONS

<u>Kaggle LLM Science Exam</u> | *Kaggle Platform*   **July 2023- October 2023**
- 223rd rank out of 2664 participant.

<u>University of Liverpool – Ion Switching</u> | *Kaggle Platform*   **February 2020- May 2020**
- 160th rank out of 2600 participant.

<u>A Fine Windy Day: Hacker-Earth ML Challenge</u> | *HackerEarth Platform*   **February 2020- May 2020**
- 15th rank out of 2100 participant.

ACHIEVEMENTS

2023	Kaggle Expert	Competition Category
2023	KaggleX mentee	KaggleX BIPOC mentorship Program
2022	Genpro Research	Employee of month
2021	Kaggle Expert	Discussion Category

SKILLS

ML Models

Bert, Roberta, Deberta, LLamaV2 7B & 13B, Zephyr 7B beta, GPT3, XGBoost, Random Forrest

Programming & Technologies

Python ,PyTorch ,Scikit-learn ,Seaborn ,Numpy ,Pandas ,Huggingface ,FastAPI ,Regex ,Streamlit ,MySQL ,Neo4j ,Git, Spacy, Quantization, APIs, Text Generation Inference, vLLM, LLama.cpp, RAG

COURSEWORK

UNDERGRADUATE

Bioinformatics, Database Management Systems, Genomics ,Proteomics ,Management Science, Mathematics, Phylogenetic ,IP Rights

COURSERA

Python Data Structures by University of Michigan, Neural Networks and Deep Learning, Improving Deep Neural Networks: Hyperparameter Tuning, Regularization and Optimization, Structuring Machine Learning Projects, Convolution Neural Networks, Sequence Models, Data Visualization, SQL, Neo4j