RANIL MUKESH

Gen-Ai Developer

About Me

Student President at Lions club CBE
GDG Executive | Startups | Python
Neural-Nets | Gen-AI | LeetCode 850+ RL |
GAN | Bio-Informatics | Transformers
Quantum Ai reseacher and writer

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Coimbatore, Tamilnadu

LANGUAGES

- English
- Tamil
- Telugu
- Hindi
- Malayalam

EXPERTISE

- Python / R / Java / SQL
- Advanced RAG / LLM Development
- Generative AI
- Computer Vision
- Machine / Deep Learning
- MLOps / Big Data Processing
- NLP / LLM / Transformers

EXPERIENCE

Student President At Lions Club
2023 - Till Now
Airport Branch - Coimbatore

Computer Vision / NLP Dev Intern At The Fusion Apps - Coimbatore . 2023- Till Now
Working as Ai Application Developer as Intern At The Fusion Apps . Tools/Stacks used - OpenCV , Tensorflow , Edge-TPU , YOLOv8,v5

Machine Learning Developer Intern at DEX , Japan
worked in Dex , Japan in hybrid mode and we developed world first Intelligent chick sexing system used - PyTorch , NVIDIA JetSon , OneAPI , Yolov8 , CV GANs , NLP and Quantum-SVM

Gen-Ai Developer at AIQuantalytics
2022- Current
developed several Ai / ML Products for AIQuantalytics as a developer and lead the team
Used - MLX , Transformers , Spark , Gradio, PyTorch, TensorFlow, Transformers, LangChain, vectorDB

EDUCATION

KPR Institute of Engineering and Technology
Bachelor of Computer Science and Engineering
(Artificial Intelligence and Machine Learning)
2022- Till Date [Expected 2026]

SBOA Matric Hr Sec School
HSC (+1 & +2)
Grade - **81.8 %**
2021-2022

SBOA Matric Hr Sec School
SSLC
Grade - **77.4 %**
2019-2020

ACHIEVEMENTS

- **Best Intern** - (Department of AIML) - KPR Institute of Engineering and Technology
- **TOP CODER** - (Department of AIML) - KPR Institute of Engineering and Technology
- **Best Contribution to CLUBS -** (Department of AIML) - KPR Institute of Engineering and Technology
- Winner At GDG Deep Ai QUIZ - **topics - core AI**
- Runner At **Techstarts** Weekend of Erode Region 2023 - **Project FitCoin**
- **Google APAC** - 2022 December
- **Top 0.2% at LeetCode** with over 400+ Hard Questions and an overall of 850+ solved questions with tutorials published on GitHub

CERTIFICATIONS

- **IBM - Data Science Professional**
- **IBM - Machine Learning Professional**
- **SQL and Databases for Data Science - IBM and Coursera**
- **Reinforcement Learning - Google Cloud**
- **Neural Networks and Deep learning by DeepLearning.ai and coursera**
- **IBM Bioinformatics from coursera by Coursera Project Network**
- **Sentiment Analysis with TensorFlow by Coursera Project Network**
- **Deep Learning and Reinforcement Learning, IBM and offered through Coursera**

PROJECTS

- **RAGs based on LLAMA3 , perplexity , mixstral**
  Developed many RAGs based on existing open source models for many custom purposes like (model hyper-tuning , Auto Annotation , Voice LLM ,Custom Voice assistant and Quantized LLMs with LangChain , TensorFlow and Apple MLX
- **LangChain based Custom ChatBot's**
  Fine-tuned models for custom use cases using LangChain, integrating advanced retrievers like Hypothetical Embedding, Merger Retriever, and Self Querying Retriever. Used tools such as FAISS, Neo4j Knowledge Graphs, Vertex AI, Pinecone, AstraDB for hybrid search, contextual compression, reranking, and model parsing, with expertise in handling long-context reordering and multi-document processing.
- **Quantum Tuned Hybrid CNN-SVM For an intelligent farming system**
  Developed and deployed an interactive system for segregating newborn chicks in farms, Deployed on NVIDIA Jetson NANO, during my internship at Dex, Japan.
- **Generative Adversarial Reinforcement Learning for Antimicrobial Susceptibility Testing with NLP**
  Used NLP for bacterial behavioral characteristics , GANs for data generation and RL for making antibiotic administration decisions
- **Quantum-Enhanced Synthetic Brain Networks for Disease Simulation**
  Developed synthetic brain networks using quantum biology principles to simulate neurological diseases like Alzheimer's and Parkinson's. Applied ViT for network modeling, CatBoost for disease dynamics, and SHAP for interpreting quantum effects on disease progression.
- **Intelligent License Plate recognition**
  Developed this whole recognition system during my internship for The Fusion Apps , this is used to detect car speed / OCR Plate detection / vehicle in and out counts / vehicle model and color detection / Standout feature is this detects the two-wheelers without helmet.Deployed this on a Google Coral Edge-TPU