Rahim Khan

✉ rahimkhan7627047457@gmail.com | ✉ k.rahim@iitg.ac.in | 📱 +917627047457
🐙 github.com/rahim-khan-iitg | 🔗 linkedin.com/in/rahim-khan-iitg

Education

Indian Institute of Technology, Guwahati　　　　　　　　　　Expected graduation date: May 2024
MSc. in Mathematics & Computing　　　　　　　　　　　　　　　　　　　　　　*GPA: 6.88/10*
Relevant Courses: Programming in C, Data Structure & Algorithms, Database Management Systems, Probability Theory, Statistical Inference,Numerical Linear Algebra,Numerics of PDE's, MatLab.

Experience

Ordnance Factory Badmal　　　　　　　　　　　　　　　　　　　Aug. 2018 - Nov. 2020
Apprenticeship　　　　　　　　　　　　　　　　　　　　　　　　　*Python, Flask, Git, GitHub*

- Constructed RESTful APIs with Flask, fostering seamless communication among diverse application components and external services, resulting in a 20% improvement in overall system efficiency.
- Elevated application functionality by seamlessly integrating machine learning models into Flask, delivering intelligent insights and enhancing user experience by 15%.

Technical Skills

- **Languages:** C,C++, Python, Javascript, Matlab.
- **Tools& Technologis:** Scikit-learn, Keras, Tensorflow,Pytorch*,Numpy, Pandas, Matplotlib, Seaborn,scipy, Pillow,HTML, CSS, Tailwindcss*, Nextjs, Django,Flask,streamlit ,SQL,NLP,Langchain,Generative AI,CV,Azure,CI/CD pipelines,Git, MLOps ,LLM Prompts .

Projects

Underwater Image Enhancement　　　　　　　　　　　　　　　Jan. 2024 - Ongoing
Dr. R.K Sinha Dept. of Mathematics IITG　　　　　　　　*Python,Numpy,OpenCV,Scikit-image*

- Study and implementation of retinex based method for image processing.
- Implemented the algorithm described in the paper BAYESIAN RETINEX UNDERWATER IMAGE ENHANCEMENT.

CodeVerse　　　　　　　　　　　　　　　　　　　　　　　　　　　Aug-Nov 2023
Dr. Kalpesh Kapoor Dept. of Mathematics IITG　　　　　*Javascript, NextJs,MySQL,CodeMirror.*

- **Plateform Architecture:-** Designed and developed the architecture of the coding platform using Next js.
- **Multilingual Support:-** Engineered the platform to support execution of 17 programming languages.
- **Database Management:-** Designed and deployed a robust MySQL database schema to efficiently manage user profiles and store code snippets.

Farmers Bot　　　　　　　　　　　　　　　　　　　　　　　　　Jan 2024
A Telegram Chatbot to help Farmers.　　　　　　　　　　*Python,LangChain,QDrant,Pandas*

- **Multi Model Support:-** Added support for 2 LLMs Google Gemini Pro and Mixtral to generate answers to querries with and without context.
- **Multilingual Support:-** it supports 11 Different Indian Languages in voice-to-voice mode and all the languages in text-to-text mode.
- Integrated **Bhashini** for text-to-speech and automatic-speech-recognition. **Qdrant** is used for vector embedding storage.

NeoGPT-Open source contribution　　　　　　　　　　　　　Dec. 2023
CodePeak 2023 by Coding Club IITG　　　　　　　　　　　*Python,Langchain,LLM ,Streamlit.*

- Functionality of **only LLM mode** added by bypassing the RAG pipeline and answer generation speed increased by 3x.
- Integrated **OpenAI support** for both RAG and only LLM mode increased accuracy by 2x.
- Developed and deployed of Qdrant Cloud support in RAG mode, optimizing system reliability and achieving a 25% reduction in response time.

Achievements

- **Gen AI Hackathon :-** Achieved 2nd rank among all the IIT students in Pan IIT Gen AI Hackathon conducted by Spark4AI IIT Kharagpur.
- **IIT JAM MA 2022:-** Achieved All India Rank 26 among 13000+ students in IIT JAM Mathematics 2022.
- **IIT JAM MA 2021:-** Secured All India Rank 719 out of 14470+ students in IIT JAM Mathematics 2021.