Rohil Bansal

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Github | Linkedin | Kaggle

WORK EXPERIENCE

Intern - Generative AI & NLP | Publiq Studio

July 2024 - Present
Remote

- Spearheaded the development and optimization of **bulk listing modules**, enhancing efficiency by 25%.
- Executed live testing and data validation, ensuring robust performance and accuracy.
- Collaborated with cross-functional teams, contributing to multiple project phases and integrating diverse technologies.

SKILLS

Machine Learning Tools: PyTorch, Tensorflow, Transformers, OpenCV, Langchain, MLflow, Databricks
Programming Languages: Python (Advanced), C++ (Basic), MySQL (Proficient), Bash
Other Technical Skills: Docker, Git, Github Actions, Streamlit, Linux, Django, Fast API

COURSEWORK

Object-Oriented Programming, Data Structures and Algorithms, Operating Systems, Machine Learning, Data Mining and Warehousing, Data Analytics, Probability and Statistics, Cloud Computing, Computer Vision

EDUCATION

Dr. B.R. Ambedkar National Institute of Technology, Jalandhar | Bachelor of Technology in Computer Science 2021-25

PROJECTS

Chess Game and Bot from Scratch | Python, Pygame, OOPS, MLflow, Docker | Github
- **AI Development**: Engineered a fully functional chess game with advanced AI capabilities using object-oriented programming principles and Monte Carlo Tree Search.
- **Performance Enhancement**: Improved decision-making accuracy, achieving a gameplay level rating of 1480.
- **Deployment & Monitoring**: Deployed the game using Docker and tracked AI performance with MLflow, ensuring continuous improvement and seamless integration.

Legal Ally Chat Bot | Python, Langchain, mistral-7b, Retrieval Augmented Generation (RAG), streamlit | Github
- **Chatbot Development**: Developed an advanced NLP-driven chatbot using Langchain and the mistral-7b model, optimizing retrieval and response accuracy.
- **Performance Optimization**: Enhanced response speed by more than 15%, delivering quicker and more accurate interactions.
- **User Experience**: Implemented user authentication and chat visualization within Streamlit, ensuring a secure and interactive user interface.

Pix2Pix Photo Colorizer | Python, Tensorflow, OpenCV, Mlflow, Docker, CI/CD, Dagshub | Github
- **Model Training**: Built and trained a Pix2Pix GAN model on the ImageNet-1k dataset, achieving superior realistic colorization results.
- **Continuous Deployment**: Established a CI/CD pipeline for ongoing model training and deployment, with performance tracking facilitated by MLflow.

Kolmogorov-Arnold Network | Python, Pytorch | Github | Paper Link
- **Development**: Implemented a KAN in PyTorch for multivariate function approximation.
- **Design**: Designed univariate function layers per the Kolmogorov-Arnold theorem.
- **Performance**: Achieved high accuracy in function approximation tasks.