Ravi Kumar

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Education

Indian Institute of Technology Jodhpur Graduation date: May 2023
M.Sc. in Mathematics ***CGPA: 7.77/10***

University of Lucknow Graduation date: Sep 2020
B.Sc. in Physics, Chemistry, Mathematics ***CGPA: 8.0/10***

Skills

Languages: Python, C++, SQL, HTML, CSS, Latex

Libraries: PyTorch, TensorFlow, openai, Pandas, Numpy, Matplotlib, Scikit-Learn, etc.

Technologies & Tools: Docker, MySQL, AWS EC2, S3, Streamlit, VS Code, LaTex, Jupyter Notebook, Flask, Git, GitHub Action Server (CI/CD/CD), CNN etc.

Academic Courses: Programming Techniques, Machine Learning, Optimization, Financial Engineering, Computer Graphics, Deep Learning, Data Structures and Algorithms.

Projects

Movie Recommendation System Sep. 2023 - Oct. 2023

- Project implemented with ML pipeline, from data ingestion to model deployment in production.
- Utilized Collaborative-Boosted Content-Based Filtering to enhance recommendation accuracy by integrating 90% of content-based filtering and 10% of the collaborative filtering.
- **Data source:** Data was collected from IMDb and OMDb API.
- **Tools and technology:** Python, Flask, Azure, NLP, HTML, CSS, Bootstrap, JavaScript, Cosine Similarities, Git.
- **Deployment:** The project was successfully deployed on Microsoft Azure.
- **Links:** Github, Project Demo, Blog

Python Package Development for database: dbautomate Jan. 2024 - Feb. 2024

- A Python package for connecting with the database.
- This package has the functionality to connect with databases, upload the data, save the data, and delete the data from the database in an interactive manner.
- **Technologies:** Python, MySQL, MongoDB.
- **Skills Demonstrated:** GitHub Action Server deploys the Python package to the PyPI repository.
- **Usecase:** The user can install the package via *pip install dbautomate*.
- **Links:** GitHub, PyPI , Docs

Medical images classification Feb. 2024 - Mar. 2024

- Developed a robust medical image classification model utilizing state-of-the-art deep learning techniques.
- Trained the model to differentiate between Normal and Pneumonia X-ray images accurately, achieving high classification accuracy.
- **Tools & Technologies:** Python, Streamlit, Docker, AWS EC2, S3, PyTorch, CNN.
- **Skills Demonstrated:** MLOps, Continuous integration/ Continuous delivery/ Continuous deployment.
- **Link:** GitHub

Stock Price Prediction Mar. 2024

- Gathered and processed historical 10 years of stock price data for analysis.
- Implemented a robust data fetching mechanism to retrieve Open-High-Low-Close (OHLC) data during runtime for real-time analysis.
- Implemented visualizations to illustrate the LSTM model's performance and generated comparisons between predicted and actual Apple stock prices for assessing model effectiveness and further forecasted stock price for the next days.
- **Tools & Technologies:** TensorFlow, LSTM, MLOps, Flask.
- **Skills Demonstrated:** Time Series Analysis, Machine Learning (LSTM), Model Optimization, Data Visualization, Model Evaluation
- **Link:** GitHub