BHANU PRATAP SINGH

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PROJECTS

AI for Trading - Ongoing

- Objective: Training deep reinforcement learning (DRL) agents to make intelligent decisions in real-time trading environments and analysing Financial Data.
- Created a custom Environment for DRL agent training
- Implemented DRL models using PyTorch as well as from stable-baselines API
- Analyzed and backtested trading strategies using VectorBT library
- Performed time-series analysis on stock and cryptocurrency data
- Explored predictive modeling techniques such as ML models, LSTM, etc for sequential data
- Collected, preprocessed, and visualized data using Yahoo Finance, NumPy, Pandas, and Matplotlib

Table Tennis Analyzer - Computer Vision

- Created a program to interpret and analyze Table Tennis games
- Used libraries like OpenCV and NumPy
- Features - Ball detection and path tracing, Net detection, Table detection, Bounce detection
- Implemented an automated score system, covering major cases according to the game rules

Titanic Survival Predictor - Web Development and Machine Learning

- Objective: Develop a Titanic Survivor Prediction web application
- Used Html, CSS, JavaScript (Vuejs) for frontend
- Implemented machine learning models in the backend to give predictions
- FastAPI for sending requests to the backend and getting the result
- Followed Scrum methodology across three sprints, managing tasks and resources in Jira

Crop Recommendation - Machine Learning

- Objective: Understand the working of various ML models and concluding why one would be better than the other
- Data preprocessing, EDA, feature engineering and feature selection on a crop dataset using numpy, pandas and scikit-learn
- Using 4 to 5 different classification machine learning algorithms and evaluating each one
- Data Visualization using seaborn and matplotlib

Image Classification - Deep Learning

- Objective: Understand the basics of PyTorch and Tensorflow-Keras API
- Hand written digit classification using linear layer Neural Network in PyTorch
- Clothes classification (fashionminst) using CNN in Tensorflow-Keras

EDUCATION

B.Sc. ARTIFICIAL INTELLIGENCE

Technische Hochschule Deggendorf

10/2022 - Present Deggendorf, Germany

- Field of study - Artificial Intelligence | Grade 2.2 (Current)

SUMMARY

I am a motivated Artificial Intelligence undergraduate student. My experience includes developing predictive models with ML/DL, data analysis, web development etc. With a strong foundation in Python, data science, and statistical analysis, I am eager to leverage my technical skills and creativity to contribute to impactful projects. My current interests revolve around time series analysis, financial mathematics and Algo-Trading. I am also fluent in German and English, which allows me to collaborate effectively in diverse, global environments

LANGUAGES

German - B1
Intermediate

English - C1
Native

SKILLS

Data Structures and Algorithms | Python | SQL | Javascript-Basic | HTML | CSS | Numpy | Pandas | Matplotlib | Scikit-learn | PyTorch | Tensorflow | Keras | Stablebaselines | OpenAI GYM | FastAPI | VectorBT | YahooFinance | Linux | Git | Github | Microsoft Office | Machine Learning | Deep Learning | Reinforcement Learning | Statistics | Time Series Analysis | Data Analysis | PowerBI | DBMS | RestAPI | PostgressSQL