Dhanush Vasa

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dhanushv2000 | DhanushVasa | Nationality : Australian

Education

University of Maryland College Park Graduation Year: 2026
Masters of Science Data Science | Fall 2024
Relevant Courses: Probability & Statistics, Principles of Data Science, Principles of Machine Leaning, Data Representation and Modeling, Communication in Data Science and Analytics, Big Data Systems, Algorithms for Data Science

Indian Institute of Information Technology Allahabad (IIITA) Graduation Year: 2023
B.Tech. in Information Technology | Link to all courses ***GPA: 8.45/10***
Relevant Courses: Software Engineering, Artificial Intelligence, OOP (C++), Data Mining and Warehousing, Graphics and Visual Computing, Algorithms and Data Structures I and II (C++)

FIITJEE Vijayawada 2017-2019
Senior Secondary Education ***GPA: 9.17/10***

Publication

Forecasting of Stock Market Movement with Heterogeneous Data and Sentimental Analysis Aug 2021 - Dec 2023
Published in ECTI Transaction in CIT (Dec 2023) *Python, TensorFLow, BeautifulSoup, VADER sentiment, SQL, Git*

- Developed an LSTM model to forecast stock volatility by incorporating various inputs from social media and news headlines to assess public mood, surpassing conventional transaction-based stock price predictions.
- Leveraging sentiment analysis resulted in favourable results, with a substantial 43.86% reduction in Mean Absolute Error and an amazing 50.93% decrease in Root Mean Square Error, indicating a major improvement in the accuracy of stock market forecast.

Experience & Research

Ramya InfoTech June 2023 - May 2024
Machine Learning Research Internship *Python, numpy, pandas, TensorFlow, SmartAPI, Keras, SQL, Git, NLP*

- Chartered the design and development of a cutting-edge localized automated crypto and stock market trading AI bot at Ramya Infotech, leveraging advanced DRL models and NLP sentiment analysis tools.
- Conducted comprehensive financial data modeling integrated with sentiment analysis, enhancing the bot's decision-making capabilities and optimizing trading strategies for improved market performance.

ThreeDots Dec 2022 - May 2023
Product Engineer Internship *Postman, Docker, Kotlin, Golang, SQL, NoSQL, Redis, GIT, JAVA, Scylla*

- Developed and enhanced real-time financial data micro services for Indian stocks, cryptocurrency, and US stocks utilising Java SpringBoot and websockets.
- Used a Redis-based distributed task queue library to create a GoLang mobile notification monitoring service.

Prescriptive Process Monitoring Jan 2023 - Jun 2023
Machine Learning Fellow and Major Project *Python, numpy, pandas, TensorFlow, Beautifulsoup, Keras, SQL, Git*

- Optimised banks loan business processes by implementing prescriptive monitoring, actively monitoring and proactively intervening to maximise resource utilization.
- Rectified the flaws in predictive process monitoring systems by acknowledging and fixing the lack of a constraint on intervention in loan origination.
- Enhanced the efficiency of the cost function by carefully monitoring and analysing limited resources. Utilized predictive and causal reasoning to detect potential dangers and develop strategic solutions to improve outcomes.

Optimising LSTM using Genetic algorithms with time series data Aug 2022 - Dec 2022
Machine Learning Fellow *Python, numpy, pandas, TensorFlow, Beautifulsoup, Keras, SQL, Git*

- Upgraded LSTM and variants with the genetic methodology for model performance and optimization.
- Discovered that standard, stacked and bidirectional LSTM models with genetic optimization outperformed with k-fold validation, achieved a root mean square error of only 17.76. Surpassing any standard variants of the LSTM model.

Intrusion Detection system using Netflow dataset Jan 2022 - Jun 2022

Machine Learning Fellow *Python, TensorFLow, numpy, matplotlib, scikit Learn, SQL, Git*

- Studied the effects of Asymmetric Autoencoders optimization on improving intrusion detection performance.
- Implementation of the the Asymmetric Autoencoder for intrusion detection reduced the reconstruction error and improved the efficiency of the model in its entirety.

Leadership and Volunteering

PRAYAAS, IIIT-A Aug 2019 - Jul 2023

Non-profitable social welfare program run by IIIT Allahabad

- Fostering a community of rural students' English skills, academic abilities, and athletic interests.
- Organising workshops, donation drive sessions, and activities to improve the living conditions of rural communities near the university.

Acoustics and Media Society, IIIT-A Aug 2019 - May 2020

- Aided in the coordination of a wide range of academic and cultural events' lighting, sound, and photographic needs
- Make sure that all club activities at IIIT-Allahabad are covered adequately, keeping accurate records and images in our database.

Skills

Languages:

Python, PHP, C++, SQL, Bash, Go, R

Technologies & Tools:

Scikit, NLTK, TensorFlow, Keras, Django, Flask, Git, Linux, Docker, VueJs, Flutter, JavaScript, HTML/CSS, Bootstrap, MangoDB, Hadoop, Kafka

Certifications:

Data Science Professional

Offered By IBM *Python, Jupyter, SQL, Pandas, Scikit-learn, SciPy*

- Proficient in Jupyter Notebooks, Python app development, SQL for relational databases, data visualization (Matplotlib, Seaborn, Plotly), data analysis (Pandas), and machine learning (Scikit-learn, SciPy).

Applied Data Science with Python

Offered By University of Michigan *Python, Jupyter, SQL, Pandas, Scikit-learn, Matplotlib, BeautifulSoup*

- Skilled for Plotting, Charting, and Data Representation in Python, Applied Text Mining in Python, Applied Social Network Analysis in Python, Data Science in Python, and Applied Machine Learning in Python.

Data Science: Foundations using R.

Offered By Johns Hopkins University *Github, Machine Learning, R, Exploratory Analysis*

- Mastered fundamental concepts and tools for the data science pipeline, including the use of industry tools, analytical thinking for complex problems, managing large data sets, creating visualizations, and publishing reproducible analyses.

Machine Learning (Professional)

Offered By IBM *Ensemble Learning, Linear Regression, Feature Engineering*

- Professionally adept in a spectrum of machine learning methodologies, including supervised classification and regression, unsupervised learning, deep learning, reinforcement learning, and exploratory data analysis, as demonstrated through completed certificates.

AI Engineering (Professional)

Offered By IBM *TensorFlow, PyTorch, Keras*

- Capable of constructing deep learning architectures using TensorFlow, PyTorch, and Keras, applying machine learning methodologies in Python, and implementing computer vision algorithms. Completed an AI capstone project integrating advanced deep learning techniques.

Data Science

Offered By IBM *Python, Jupyter, SQL, Pandas, TensorFlow, Machine Learning, PyTorch, Keras*

- Accomplished in Python for Data Science, AI and Development, including tools, capstone projects, machine learning, data visualization, methodology, SQL, analysis, and fundamentals.