

Jyothiraditya Pemmasani

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EDUCATION

University of Illinois, Urbana Champaign

Dec 2024

MSc:Statistics (Analytics)

GPA: 3.6/4

Courses:Adv. Probability and Stochastic Processes, Adv. Machine Learning, Mathematical Statistics, Statistical Learning, Brownian Motion, Random Walk, Martingale, Stochastic Calculus and Linear Algebra

Netaji Subhas University Of Technology, New Delhi

Aug 2019 - May 2023

B.Tech:Computer Engineering | **Minor:** Artificial Intelligence

GPA: 3.9/4

Courses:Data Mining, Machine Learning, Computer Vision, Natural Language Processing, High Performance Computing, Calculus, Data Structures and Algorithms, Intro to Probability and Stochastic Processes

WORK EXPERIENCE

Illinois Risk Lab: Quantitative Researcher || UIUC

Aug 2024 - Present

Urbana,IL

- Research on decentralized finance and smart contract, historical exploits and current challenges
- Analyze DeFi insurance policies, offering insights for product development and risk management
- Develop a risk assessment framework for evaluating smart contract safety on code vulnerabilities

Chain-Sys Corporation: Data Science Intern

May 2024 - Aug 2024

Michigan,USA

- Built a python system for customer segmentation using past 5 years E-commerce purchase data
- Performed feature engineering and implemented Mercator projection for effective data visualization
- Created clusters of products, and customer using KMeans algorithm and Silhouette score metric
- Obtained precision score of 0.79 using Voting Classifier ensemble technique

Datacube Solutions: Data Scientist

May 2023 - Dec 2023

Abu Dhabi, UAE

- Engineered a document classification system using Convolutional Neural Network and NLP techniques
- Transformed the data by chunking, removing stop words, tags and digits in 18K document text data
- Modeled a 1D CNN architecture with word and character embedding, achieving an accuracy of 91%

OYO Hotels and Rooms: Data Science Intern

May 2022 - Aug 2022

Gurugram, India

- Constructed and deployed data pipeline for fraud detection using statistical and regression techniques
- Imported 20GB data using PostgreSQL for data cleaning, EDA and Machine Learning model
- Attained best F1-score of 0.98 using Random Forest ensemble classifier and saving potential losses

PROJECTS

Backtesting Trade Strategies

May 2024 - Aug 2024

- Developed a ML based trading strategy for stock prediction based on technical analysis using TA-Lib
- Implemented 8 different strategies for bullish candlestick patterns and conducted backtesting
- Executed multiple trades using Random Forest achieving win-rate of 48% and positive profit

Stock Predictor using Deep Learning

Jan 2024 - Apr 2024

- Built a stock prediction tool using data from Yfinance Api for the stocks: IBM and Amazon
- Forecasted future prices and backtested multiple Deep Learning algorithms for advanced predictions
- Achieved an R2 score of 97% using Recurrent Neural Network and LSTM trained over 100 epochs

SKILLS

- **ML/AI Tools:** R Studio, Scikit-Learn,Numpy, TensorFlow, Jupyter, Keras, TA-Lib, NLTK, Matlab
- **Languages:** R(Proficient), Python(Proficient), C/C++, SQL
- **Certificates:** Capital Markets, Financial Derivatives, Fixed Income Investment Strategies (**NYIF**)
Options 101 (**Akuna Capital**), Options Market (**NSE**)