Venkat Jagarlamudi

https://github.com/starlord-cyber https://linkedin.com/in/venk-atj/ venkatj2002@gmail.com

Summary

Results-driven MS in Predictive Analytics and Risk Management grad student with a B.Tech in Computer Science. Proficient in data science and financial markets (derivatives). Seeking to leverage strong analytical prowess and passion for innovation in a dynamic data science or analytics role.

Education

University of Illinois Urbana-Champaign Aug 2023 - Dec 2024

Master of Science in Predictive Analytics and Risk Management

- Coursework: Big Data Analytics, Predictive Analytics, Foundations in Risk Management, Investment and Financial Markets, Applied Bayesian Analysis, Risk Analytics and Decision Making, Big Data Analytics in Finance, Basics of Statistical Learning

VNR Vignana Jyothi Institute of Engineering and Technology Aug 2019 - May 2023

Bachelor of Technology in Computer Science and Engineering

- Coursework: Statistical Methods for Data Analysis, Machine Learning, Data Structures, Design and Analysis of Algorithms, Software Engineering, Object Oriented Programming through C++, Artificial Intelligence, Python Programming, Data Visualization, Neural Networks and Deep Learning

Skills

Languages: C/C++, Python, JavaScript/TypeScript, SQL, Solidity, HTML/CSS, R

Tools: Git/GitHub, Remix IDE, VS Code, AWS, R Studio

Frameworks: React, Node.js, Web3

Libraries: Pandas, NumPy, Matplotlib, Seaborn, GGPlot2, JAGS, BUGS

Areas Of Interest

Data Science, Machine Learning, Software Development, Data Visualization, Data Analytics and Risk Identification, Risk Management

Projects

Big Data Property Assessment for Cook County | *Machine Learning, Data Analysis, Predictive Modeling*

- Performed data preprocessing, including handling missing values, feature engineering, and correlation analysis to select significant variables.
- Implemented multiple predictive algorithms such as linear regression, LASSO regression, and XGBoost, tuning hyperparameters with cross-validation to optimize performance.
- Utilized libraries such as `dplyr`, `tidyverse`, `glmnet`, and `xgboost` for data manipulation and model implementation.
- Evaluated model accuracy using Mean Squared Error (MSE) and achieved the lowest MSE in the class.

California Traffic Accident Analysis and Prediction | *Data Analysis, Predictive Modeling*

- Analyzed a dataset of approximately 1.74 million traffic accidents in California from 2016 to 2023.
- Identified patterns, high-risk zones, and contributing factors to accidents by examining accident severity, location, timing, and environmental factors.
- Developed predictive models to forecast accident likelihood under various conditions and generated hotspot areas for major accident-prone areas.

Option Pricing Analysis using Black-Scholes Formula | *Numerical Calculations, Option Pricing, Black-Scholes Model*

- Explored the dependency of option prices on time to expiration and stock price variation through numerical calculations.
- Utilized the Black-Scholes formula to estimate European call and put option prices in various scenarios.
- Implemented an iron condor strategy involving buying/selling call and put options with specified strike prices.
- Explored outcome scenarios at expiration and before expiration, including scenarios where the stock price aligned with specified strike prices.

Achievements

Achieved 1st Prize in IEEE college coding contest.