Jayasuryan Mutyala

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LeetCode: https://leetcode.com/u/user2092r/

EDUCATION

- **Manipal Institute of Technology**   Manipal, India
  Bachelors Of Technology in Computer Science and Engineering (AI, ML)   *2021 – 2025*
  - **Relevant Coursework**: Data Structures and Algorithms, Object-Oriented Programming, Operating Systems, Database Management Systems, Machine Learning, Deep Learning, Big Data Analytics, Computer Vision
  - **Achievements**: Authored a research paper titled "Evaluating the Effectiveness of a Model of Three-Level Moving Average Strategy," presented at the 3rd World Conference on Information Systems for Business Management (ISBM 2024), Bangkok, Thailand. The paper was selected for publication by Springer.

WORK EXPERIENCE

- **Shivansh Solutions Asia**   Hong Kong
  Software Engineer Intern *— GitHub*   *May 2024 – July 2024*
  - Designed and implemented an algorithmic trading strategy using price-action concepts and support-resistance lines, achieving a total return of 15% and a 62.5% win rate.
  - Conducted extensive backtesting using historical stock data to optimize trading parameters and ensure consistent results across varying market conditions.
  - Automated stock trades using the KiteConnect API, incorporating real-time risk management techniques such as dynamic trailing stop-losses,resulting an improvement in trading efficiency

PROJECTS

- **Stock Movement Prediction — GitHub**
  Technologies: *Python, Scikit-Learn, Pandas, Numpy, Matplotlib*
  - Developed an algorithmic trading strategy using a three-level moving average technique.Employed Principal Component Analysis (PCA) to reduce data dimensions by 85%, optimizing model training speed while maintaining high prediction accuracy.
  - Conducted a comparative analysis using Logistic Regression, SVM, and Decision Tree models to identify the most effective model for market movement predictions, with SVM model returning the highest profit returns.

- **Breast Cancer Detection — GitHub**
  Technologies: *Python, PyTorch, Sci-kit Learn, Pandas, Numpy, Matplotlib, Seaborn*
  - Engineered a CNN model using Transfer Learning with ResNet-18 to classify breast MRI scans, achieving an 80.6% accuracy on the testing set.
  - Improved the model's generalization ability by employing data augmentation and achieved a recall of 69.5% on the testing set.

- **Crime Detection Analysis — GitHub**
  Technologies: *Python, PySpark, Sci-kit Learn, Pandas, Matplotlib*
  - Analyzed Los Angeles crime data using PySpark, applying KMeans and KModes clustering to identify crime hotspots, optimizing police station placement.
  - Evaluated KMeans model using silhouette scores, achieving a score of 0.447 to determine the optimal cluster size.

PROGRAMMING SKILLS

- **Languages**: Python, C, Java, SQL, HTML, CSS, JavaScript
- **Libraries & Frameworks**: PyTorch, SciKit-Learn, Numpy, Pandas, Matplotlb, Seaborn, Django
- **Tools**: Git, KiteConnect API