KAMINENI PRAVALIKA

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Recent graduate with a bachelor's in data science and data Analytics Engineering, currently pursuing a Master's degree, seeking an entry-level position where I can apply my skills in data analysis, machine learning, interpersonal communication, organizational and advanced analytics to contribute to the success of a forward-thinking organization. Passionate about leveraging data-driven insights to solve complex challenges.

Academic Projects

- **Fashion MNIST Classification | Python, TensorFlow, Keras, CNN, Deep Learning**
  Developed a deep learning model to classify clothing images from the Fashion MNIST dataset, using a 4-layer Convolutional Neural Network. Applied dropout and batch normalization to enhance accuracy and prevent overfitting, achieving high accuracy in predicting clothing categories.

- **Accenture Data Analytics and Visualization Virtual Experience Program (SOCIAL BUZZ)** – Accenture North America, Forage. Cleaned and modelled three datasets (content, reaction, reaction types) to uncover insights. Analysed usage trends to identify peak months and top-performing content categories. Presented key findings and recommendations to the client using data visualizations.

- **Customer Segmentation and Retail Data Analysis – Quantium Simulation**
  Performed customer and transaction data cleaning, exploratory data analysis, and customer segmentation using R/Excel. Identified key purchasing patterns and generated actionable insights to support data-driven marketing strategy decisions. Delivered a final report with commercial recommendations to improve targeting and customer lifetime value. Gained hands-on experience working with large-scale transactional datasets and deriving insights aligned with business KPIs.

- **Connect 4 AI Evaluation: Minimax vs Monte Carlo Tree Search**
  Developed and evaluated two AI algorithms—Minimax with Alpha-Beta Pruning and Monte Carlo Tree Search (MCTS)—for the classic game Connect 4 using an interactive Streamlit web interface. The project focused on simulating and comparing their strategic depth, speed, and adaptability. Minimax applied a depth-limited, deterministic approach to efficiently evaluate future game states, while MCTS used a

probabilistic method, simulating random games and leveraging exploration-exploitation balance via UCT to estimate move value.

- **Stock Market Analysis Using AWS**
  Built a lightweight, cloud-native platform for real-time stock market analytics using EC2, S3, AWS Glue, Athena, and Power BI. The system ingests intraday OHLCV data every 5 minutes via Python (Alpha Vantage API) on EC2, stores raw files in S3, transforms them into partitioned Parquet using PySpark on AWS Glue, and enables analysis through Athena. Interactive Power BI dashboards (on EC2) display KPIs like RSI, VWAP, and volatility with <1-minute latency and 15-minute refresh cycles. Designed for automation, scalability, and cost-efficiency with a pay-per-query model, S3 lifecycle policies, and a modular, serverless ETL—eliminating the need for managed databases or SaaS BI tools and enabling future ML integrations.

- **Student Performance prediction using hybrid ensemble.**

  Designed a dynamic weighted hybrid ensemble model to predict student academic performance using the UCI Student Performance dataset. Combined Random Forest, XGBoost, and Neural Network classifiers with weights adjusted based on the influence of prior grades (G1 and G2)—shifting from 40-30-30 to 25-25-50 when grades are highly predictive. Categorized final grades (G3) into Low, Medium, and High for multi-class classification across 395 students and 32 features. Achieved 82% accuracy on a 20% test split. Built a Streamlit interface to visualize predictions and support academic decision-making, with G1 and G2 contributing 57.5% of overall feature importance, enhancing model interpretability and adaptability.

Education

- Currently Pursuing my master's in data science from **University of New Haven**, Connecticut, USA.
- Bachelor's in computer data science and data Analytics Engineering in Loyola Academy Hyderabad, Telangana, India (2021-2024).

Skills

- Proficiency in Microsoft Excel
- Familiarity with data management tools (e.g. Navigate).
- Excellent verbal and written communication skills.
- Organizational and multitasking abilities.
- Adaptability to shifting priorities and tasks.
- Technologies: Python, SQL, Machine Learning, R Programming, Statistical Modelling.
- Libraries: Pandas, NumPy, Scikit-learn, TensorFlow, Keras, Seaborn, Matplotlib, PyTorch.
- Databases: MySQL.
- Project Tools: Tableau, Power BI, MS Office, MS Excel.

Certifications

Teaching Assistant and CO-FOUNDER of Each One Teach ten a social Enterprise

- Maintained detailed records of student progress and provided guidance to faculty.
- Supported student engagement through academic counselling and resource allocation.
- Assisted with administrative tasks, including project coordination and report management.

TECHNICAL

- Data base management system (National Programme on Technology Enhanced Learning).
- Data Analysis Using python (IBM).
- Data Analytics and Visualization Job Simulation (Accenture North America).
- Data Analytics job Simulation (Quantium)