PRANEETH BOINPALLY

Boinpallypraneeth.github.io |+1 571-595-8499| Boinpally.praneeth@gmail.com | **LinkedIn**

EDUCATION

George Mason University | Virginia | USA

Fairfax, VA, USA

Master of Science in Computer Science

January 2023 – May 2024

GPA 3.68/4

Sphoorthy Engineering College | Hyderabad, India

Hyderabad, TS, India

Bachelor of Technology in Computer Science and Engineering

August 2018 – July 2022

GPA 7.4/10

WORK EXPERIENCE

Data Analyst Intern   **Hyderabad, TS, India**

TryCryFly Service Limited   Oct 2021 – Aug 2022

- Analyzed and interpreted complex data sets to provide actionable insights for business strategy.
- Collaborated with cross-functional teams to optimize data collection processes and enhance data quality.
- Utilized SQL and Python for data extraction, transformation, and analysis, resulting in a 95% improvement in data accuracy.
- Prepared comprehensive reports and visualizations using tools like Power BI, effectively communicating findings to stakeholders.
- Contributed to the development of data-driven solutions that improved operational efficiency and customer satisfaction.

PROJECTS

Network Intrusion Detection Using Machine Learning Techniques

Technologies: XGBoost, scikit-learn

- Created a system to identify and analyze network intrusions using machine learning.
- Analyzed and cleaned the NSL-KDD dataset to identify relevant features for intrusion detection.
- Developed predictive models using XGBoost, achieving a 98% accuracy rate.
- Generated visualizations to identify patterns in network traffic and intrusions.
- Reported findings to stakeholders, providing actionable insights into network security.

Data Tool Kit

Technologies: Python, Flask, React, Chart.js, Pandas, Axios, GitHub

- Developed a web-based application for data cleaning and visualization, facilitating efficient data analysis.
- Implemented a Flask backend to handle file uploads, clean data, and return processed results using Pandas.
- Created a React frontend with components for file upload, data cleaning options, and interactive visualizations using Chart.js.
- Enabled users to choose specific data cleaning operations such as removing duplicates and handling missing values.
- Integrated Axios for seamless communication between the frontend and backend.
- Enhanced user experience with dynamic charts and graphs, allowing users to visualize cleaned data in multiple formats.
- Deployed the application on GitHub Pages and maintained the project repository on GitHub for version control and collaboration.

Driver Drowsiness Detection Using Machine Learning

Technologies: Python, OpenCV

- Developed a system to monitor and analyze eye movements to detect driver drowsiness.

- Collected and preprocessed data from webcam images to monitor eye movements.

- Implemented machine learning algorithms to classify drowsiness states.

- Visualized detection results and performance metrics to ensure system accuracy and reliability.

- Improved detection accuracy by 20% through iterative model tuning and data analysis.

Network Intrusion Detection Using Machine Learning Techniques

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Intelligent Proctor

Technologies: Keras, TensorFlow

- Built a system to monitor online examinations through data analysis of video feeds.
- Collected and processed video data to detect suspicious activities during exams.
- Applied deep learning techniques to enhance detection accuracy.
- Created dashboards and reports to visualize exam integrity metrics.
- Reduced false positives by 15% through data-driven adjustments and model improvements.

Server-side Business Logic and Android Client Mobile App

Technologies: SQL, Android, Java

- Designed a server-side application and Android client for efficient data management.
- Developed and optimized SQL queries to handle large datasets and ensure fast retrieval.
- Analyzed user interaction data to improve app features based on usage patterns.
- Visualized key metrics to provide insights into user behavior and app performance.
- Improved data efficiency by 30% through query optimization and database tuning.

Claim Safe | Auto Insurance Premium Recommendation System

Technologies: Python, Machine Learning, Data Visualization

- Developed a system to recommend auto insurance premiums based on comprehensive data analysis.
- Integrated and analyzed data from multiple sources, including driver history and vehicle information.
- Built predictive models to assess risk and recommend insurance premiums.
- Visualized risk assessments and premium recommendations using interactive dashboards.
- Enhanced decision-making by providing clear, data-driven insights into premium determination.

Technical Skills

Languages: Java, Python, Python Scripts, C, SQL, CSS, JavaScript, HTML, C++, R

Tools and Libraries: Pandas, NumPy, scikit-learn, XGBoost, TensorFlow, Tableau, Power BI, Microsoft Excel, Seaborn, Jupyter Notebook, Matplotlib

Techniques: Data Analysis, Data Cleaning, Data Visualization, Statistical Analysis, Machine Learning, Predictive Modeling, Data Mining, ETL Processes, DBMS, Data Warehousing, A/B Testing, Hypothesis Testing, Regression Analysis, Time Series Analysis

Other Skills: Project Management, Problem-Solving, Critical Thinking, Communication Skills, Collaboration, Attention to Detail

Cloud: AWS (AWS S3, AWS Redshift, AWS RDS, AWS Glue, AWS Lambda, Kubernetes), Microsoft Azure (Azure Blob Storage, Azure SQL Database, Azure Data Factory, Azure Synapse Analytics, Azure Machine Learning)

Certificates

Java Programming

- **Institution**: Great Learning

- **Description**: Completed an in-depth Java programming course covering object-oriented programming, data structures, algorithms, and real-world applications.

IPL Auction Bidding using Data Science

- **Institution**: Great Learning

- **Description**: Developed a data science project focused on IPL auction bidding, including data collection, preprocessing, model building, and prediction analysis.

Java Basic

- **Institution**: HackerRank

- **Description**: Achieved proficiency in basic Java programming concepts through HackerRank's online challenges and assessments.

AWS Academy Cloud Foundations Badge

- **Institution**: AWS Academy

- **Description**: Earned the AWS Academy Cloud Foundations Badge, demonstrating foundational knowledge of cloud computing concepts, AWS services, security, architecture, pricing, and support.

MySQL Skill Badge

- **Institution**: LinkedIn

- **Description**: Acquired the MySQL skill badge by completing LinkedIn's assessment, covering essential MySQL database management and query optimization skills.

Python Basic

- **Institution**: HackerRank

- **Description**: Demonstrated competence in basic Python programming by successfully completing HackerRank's Python challenges and exercises.

Awards and Achievements

Best Project Award

- Recognized for the best project in the CSE group during the spring semester of the 2021-2022 academic year for the Driver Drowsiness Detection system.

Hackathon Achievement

- Secured 5th place among 100+ teams in a hackathon conducted by St. Peter's Institute. Designed an AI-based proctoring system to monitor online exams and prevent malpractice. Awarded a technical internship as a result.

Merit-Based Scholarship

- Received a merit-based scholarship for a bachelor's in computer science. Awarded for being in the top 5% of students in the class in recognition of academic excellence.