NEERESH KUMAR PERLA

neereshkumar.nk@gmail.com | Ph: 774-518-9337 | https://www.linkedin.com/in/nperla

CAREER SUMMARY

Passionate and dedicated data science enthusiast actively honing skills through self-study, practical application, and participation in public datasets and competitions. Eager to leverage a strong foundation in data science to drive actionable insights and solve complex problems.

SKILLS

Programming Languages: Python, R, SQL, Java, Bash
Data Analysis & Visualization: Excel, Tableau, Power BI, Matplotlib, Seaborn, Plotly
Machine Learning & Statistics: TensorFlow, scikit-learn, NumPy, Pandas, Descriptive Analysis, Predictive Analysis, Hypothesis Testing, Feature Selection, Model Evaluation, Hyperparameter Tuning
Data Wrangling and Cleaning: Data Preprocessing, Data Cleaning, Feature Engineering, Handling Missing Data
Others: High Performance Scientific Computing, Microsoft Azure, NoSQL Databases, Selenium, Git, HTCondor, Pegasus WMS

PROFESSIONAL EXPERIENCE

Programmer Analyst | Cognizant | Hyderabad, India **Mar 2021 – Dec 2022**

- Utilized Selenium, a widely used automation testing tool, along with Java programming language to create automation scripts that would simulate user interactions and verify policy correctness
- Worked closely with cross-functional teams, including business analysts, developers, and quality assurance professionals, to ensure effective coordination and alignment of policy validation efforts.

Data Engineer Intern | Cognizant | Hyderabad, India **Feb 2020 – Sep 2020**

- Gathered and processed a large dataset containing over 100,000 rows of movie-related data, including user ratings, movie information, and user profiles.
- Utilized Apache Spark's MLlib library to implement the ALS algorithm and engineered the data pipeline to transform and preprocess the dataset, ensuring data quality and compatibility with the ALS model.

Artificial Intelligence Intern| WingfoTech Pvt. Ltd | Hyderabad, India **May 2019 – Jul 2019**

- Engaged in extensive self-learning to develop a comprehensive understanding of diverse machine learning algorithms, including but not limited to decision trees, random forests, support vector machines, and neural networks.
- Created data preprocessing pipelines to enhance dataset quality and experimented with feature engineering, dimensionality reduction, and hyperparameter tuning to optimize model performance.

PROJECTS

https://github.com/neeresh

Python Workflow Orchestrator for Gravitational-Wave Analysis and Distributed Computing

- Developed a Python workflow utilizing PyCBC, a gravitational-wave data analysis package, and orchestrated job execution using Pegasus WMS, optimizing job properties and requirements.
- Executed the workflow seamlessly on both Unity cluster and local machine resources, utilizing HTCondor for efficient distributed computing.
- Designed DAG files to outline workflow structure, dependencies, and execution logic, complemented by the creation of submit scripts to manage job submissions to HTCondor.

Data Analysis for Accurate Sky Location Determination of Gravitational Wave Mergers Using Bayesian Inference and MCMC

- Performed Bayesian inference, alongside comprehensive data preprocessing including data cleaning, analysis, and quality checks on gravitational wave data obtained from LIGO and VIRGO observatories.
- Utilized the Markov Chain Monte Carlo (MCMC) algorithm and Bayesian inference for parameter estimation, achieving a 98% alignment with published values and demonstrating proficiency in advanced data analysis and precise sky location determination for mergers.

Language in Education Project: Investigating Regional Teaching's Influence

- Administered the survey to a representative sample of students, considering factors such as demographics, educational levels, and regional language backgrounds to ensure a diverse range of responses.
- Examined the responses to identify patterns, correlations, and variations, enabling a comprehensive understanding of the impact of teaching in the regional language on students' knowledge.
- Attained impressive classification performance, showcasing ROC-AUC scores of 0.72 (training) and 0.68 (testing).

EDUCATION

University of Massachusetts Dartmouth, North Dartmouth, MA **Dec 2022 – present**
Master of Science in Data Science **GPA – 4.0 / 4.0**

Jawaharlal Nehru Technological University, Hyderabad, India **Jul 2016 – Sep 2020**
Bachelor of Technology in Electrical and Electronics Engineering **GPA – 6.82 / 10.0**