Abeer Mathur

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EDUCATION

The Pennsylvania State University, College of Engineering   University Park, PA
Bachelor of Science in Computational Data Science GPA: 3.5/4.0   May 2024
Minor: Mathematics, Statistics
Relevant Coursework: Data Structures and Algorithms, Programming in Python, Data Management for Data Science, Statistics, Probability, Artificial Intelligence, Web-based Object Oriented Programming, Machine Learning, Big Data (Scala, Hadoop).

SKILLS

Python (numpy, sklearn, pandas, matplotlib) * SQL * Java (JOptionPane) * Tableau * R (programming language) * Docker * Linux * Git
Hadoop * Scala (Spark) * Azure DevOps * PowerBI * Statistical Modeling * Machine Learning * Artificial Intelligence * Data Visualization
Data Analysis * KQL * Android Studio * Figma * Azure * ETL * Time management * Conflict Management * Negotiation * Leadership

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EXPERIENCE

Data Science Intern (Database Redesign/API Performance Degradation Analysis)   Remote, PA
Constellation Energy   June 2023 – Present
- •Redesigned and optimized an Oracle SQL database for a customer-centric application serving 200,000 users, resulting in a remarkable 44% reduction in database size.
- •Analyzed inefficiencies in performance and runtime for API endpoints by writing KQL queries and building a PowerBI dashboard, leading to improvements in performance and runtime.

Data Scientist (Autonomous Vehicle Project)   State College, PA
Penn State Advanced Vehicles Team   Jan 2023 – Present
- • Collaborated with a small sub-team to help build a level 4 autonomous vehicle in a project partnered with General Motors.
- • Collected (Cepton) LiDAR and (Delphi) Radar outputs by publishing the raw data to a ROS topic.
- • Calibrated the LiDAR and Radar data by testing and analyzing the outputs in a Docker container.
- • Streamlined the Radar data collection process through a Python script that provided usable 3D coordinate data.
- • Utilized the data to train a "YOLO" machine learning model to detect pedestrians and objects from up to 175m.

Assistant Data Scientist (Addiction Dashboard project)   State College, PA
Department of Human Development and Family Studies   Oct 2021 – May 2022
- • Utilized SQL and R skills to extract and clean geolocation data pertaining to recovering addicts.
- • Examined the dataset and built functioning data visualizations like charts and digital line graphs using Tableau.
- • Analyzed the dataset and synthesized key findings in a formal presentation to my team.

Lead Data Scientist (KCF Industry 4.0 project)   State College, PA
KCF Technologies (Automotive Company), Engineering Leadership Society Volunteer   March- April 2022
- • Worked collaboratively to collect survey data from major automotive companies regarding Industry 4.0 Practices.
- • As the lead data scientist, created visualizations on the survey data using Tableau and debriefed my team on my findings.
- • Led the team and presented our findings to company executives in a 25-minute-long formal presentation.

Artificial Intelligence Tic Tac Toe Game   State College, PA
Personal Project   June 2021 – July 2021
- • Utilized my knowledge of data structures, algorithms, and object-oriented programming concepts to apply the "minmax" algorithm and build a two-player Tic-Tac-Toe game in Java.
- • Demonstrated excellent time management and critical thinking skills to break the project into manageable weekly goals.
- • Integrated a GUI that supports a two-player system through the JOptionPane library.

CodePath Android Development   State College, PA
Personal Project   June 2021-July 2021
- • Incorporated Agile programming methodologies to create clones of apps such as Instagram, Twitter, and Flicker (check website).

LEADERSHIP/ EXTRACURRICULARS

Statistics Club   State College, PA
Vice President   2023-2024
- • Lead club activities organized club social events, spoke to sponsors and companies to organize talks, trips, and activities for club members.

50/50 Raffle   State College, PA
Volunteer Sales associate   November 2022
- • Sold **$3090** in raffle ticket sales in 3 hours through my excellent communication and negotiation skills.
- • **Ranked 1st** out of 25 sales representatives at the event while being the only individual seller in the group.

Abba Java Coffee   State College, PA
Barista   2020 – Present
- • Serve coffee and help distribute food, clothing and other goods to students and those in need in the State College community.