

Abeer Mathur

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SKILLS

Python (numpy, sklearn, pandas, matplotlib, XGBoost) * SQL * Java * 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 * Agile * Azure * ETL

EXPERIENCE

Data Science Intern (Database Redesign/API Performance Degradation Analysis)

Remote, PA

Constellation Energy

June 2023 – August 2023

- Redesigned and optimized an Oracle SQL database for a customer-centric application serving 200,000 users by utilizing Agile design practices, resulting in a 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 programming 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 “minimax” algorithm and build a two-player AI(Artificial Intelligence) Tic-Tac-Toe game in Java.
- 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 Flickr (check website).

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).

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.