Abeer Mathur

Email: abeermathur7@gmail.com * **Phone**: 267-300-5345 * **Website**: abeermathur7.github.io/portfolio/

SKILLS

Tools: Python (numpy, sklearn, pandas, matplotlib, XGBoost) * SQL * Java * PowerBI * R (dplyr, tidyverse, ggplot2) * Docker * Linux * Git * Hadoop * Scala (Spark) * Azure DevOps * Tableau * KQL * Android Studio * Figma * Azure

Concepts: Agile * ETL * Statistical Modeling * Machine Learning * Artificial Intelligence * Data Visualizations * Data Analysis * Data Cleaning * Object Oriented Programming * CI/CD * DevOps

---

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 "minmax" 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 Flicker (check website).

EDUCATION

The Pennsylvania State University, College of Engineering — **University Park, PA**
Bachelor of Science in Computational Data Science — **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.