

Abeer Mathur

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EDUCATION

The Pennsylvania State University, College of Engineering

Bachelor of Science in Computational Data Science Minor: Mathematics, Statistics

University Park, PA

May 2024

EXPERIENCE

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

Constellation Energy

Remote, PA

Jun 2023 – Aug 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)

Penn State Advanced Vehicles Team

State College, PA

Jan 2023 – Aug 2023

- Built a level 4 autonomous vehicle as a “Perception” team member for a project partnered with General Motors.
- Collected and calibrated (Cepton) LiDAR and (Delphi) Radar outputs by publishing the raw data to a ROS topic.
- Streamlined the Radar data collection process by running a Python script in Docker to convert raw data into 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)

Department of Human Development and Family Studies

State College, PA

Oct 2021 – May 2022

- Extracted and cleaned geolocation data pertaining to recovering addicts through SQL and R programming.
- Examined the dataset and built functioning data visualizations like charts and digital line graphs in Tableau.
- Analyzed the dataset and synthesized key findings in a formal presentation to my team.

Lead Data Scientist (KCF Industry 4.0 project)

KCF Technologies (Automotive Company), Engineering Leadership Society Volunteer

State College, PA

March 2022- Apr 2022

- Collaborated to collect survey data from major automotive companies regarding Industry 4.0 Practices.
- Developed visualizations on the survey data using Tableau and presented our findings to company executives.

PROJECTS

Artificial Intelligence Tic Tac Toe Game

Personal Project

State College, PA

June 2021 – July 2021

- Employed my knowledge of object-oriented programming, data structures, and algorithms 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.

Android App Development (CodePath)

Personal Project

State College, PA

June 2021 - July 2021

- Incorporated Agile programming methodologies to create clones of apps such as Instagram, Twitter, and Flickr.

LEADERSHIP / VOLUNTEER WORK

Abba Java Coffee

Barista Volunteer

State College, PA

2020 – Present

- Serve coffee and help distribute food, clothing, and other goods to students and those in need in the State College community.

Statistics Club

Vice President

State College, PA

2023-2024

- Managed club activities, organized club social events, spoke to sponsors and companies to organize talks, trips, and activities for club members.

50/50 Raffle

Volunteer Sales associate

State College, PA

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.

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

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