

# Abeer Mathur

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## EDUCATION

### Pennsylvania State University

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

University Park, PA

Aug. 2020 – May 2024

## EXPERIENCE

### Data Science Intern

Constellation Energy

Jun 2023 – Aug 2023

Remote, PA

- 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.
- Identified performance and run-time inefficiencies in API endpoints by developing KQL queries and building a PowerBI dashboard.

### Data Scientist (Autonomous Vehicle Project)

Penn State Advanced Vehicles Team

Jan 2023 – Aug 2023

State College, PA

- Built a level 4 autonomous vehicle for a project partnered with IBM and 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

Oct 2021 – May 2022

State College, PA

- 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

March 2022- Apr 2022

State College, PA

- 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 | Java, JOptionpane

Jun 2021 – Jul 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) | Java, Android Studio

Jun 2020 - Jul 2021

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

## LEADERSHIP

### Abba Java Coffee | Volunteer Barista

Aug 2022 – 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

Jan 2023 - Present

- Spearheaded club activities, curated social events, and secured sponsors and companies to facilitate enriching talks, trips, and activities for 20+ club members

### 50/50 Raffle | Volunteer Sales associate

Nov 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.

## TECHNICAL SKILLS

**Languages:** Python, R, Java, SQL, JavaScript, HTML/CSS, Scala

**Frameworks:** Android Studio, Figma, Azure, Hadoop, Spark, Tableau, PowerBI, Azure DevOps

**Developer Tools:** Git, Docker, Linux, Azure, Android Studio, VS Code

**Libraries:** numpy, sklearn, pandas, matplotlib, XGBoost, dplyr, tidyverse, ggplot2

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