Andrew Tatum

Hard-working Data Scientist with a background in machine learning and data visualization

Github Link: DrewTatum.github.io   LinkedIn: www.linkedin.com/in/drewtatum5
Lake Worth, FL 33462   Email: drewtatum5@gmail.com | Phone: 470-289-7274

Education

DePaul University, Chicago, IL   **Anticipated Graduation: August 2022**
Master of Science: Data Science   GPA: 4.0/4.0
Concentration: Computational Methods
Relevant Courses Taken: Neural Networks and Deep Learning, Mining Big Data, Data Visualization, Advanced Machine Learning, Database Processing for Large-Scale Analytics, Programming Machine Learning Applications

Slippery Rock University, Slippery Rock, PA   **Graduation: May 2020**
Bachelor of Science; Major: Exercise Science   GPA: 3.7/4.0
Minors: Statistics, Computing

Data Science Work Experience

Amazon, Remote   **Oct 2020 – Oct 2021**
Work Force Analyst
- Managed ad-hoc queries based on business needs
- Provided short term interval staffing requirements based on future and historical data
- Led weekly meetings for higher up business associates
- Created statistical reports for managers based on user needs

Slippery Rock University, Slippery Rock, PA   **Aug 2018 – May 2020**
Research Assistant
- Performed different lower dimensional analysis techniques like PCA k-means clustering to find relationships between chemical elements in certain rock formations
- Applied different exploratory and statistical analysis on different features within the large database

Data Science Projects

Monte Carlo Algorithms   **Jan 2022 – Present**
March Madness Monte Carlo Bracket Simulation
- Created multiple Monte Carlo based algorithms to simulate and predict the final results of the 2022 March Madness bracket
- Applied different statistical approaches like Bayesian and Markov Chain
- Relied on randomness by determining the distribution and likelihood of each parameter in the model based on historical data

Intelligent Information Retrieval Systems   **Jan 2022 - Present**
DePaul Course Catalog Intelligent Information Retrieval System
- Returned the most similar courses offered at DePaul University to the user based on their query after weighting the terms and computing their similarity
- Created web crawler to index the courses from DePaul University's course catalog
- Used a weighting similarity scheme based on the course title versus the course description

Advanced Machine Learning   **Sep 2021 – Nov 2021**
NBA Player Position Clustering Analysis
- Explored the relationship between a player's position based on game stats, physique, and draft position
- Viewed player positions in two ways: The first as 5 separate positions (PG, SG, SF, PF, C) and the second as three groups (Guards, Forwards, Centers)
- Applied different PCA kernels to the player clusters to try and distinguish the positions in a lower dimensional space

Programming Machine Learning Applications   **Mar 2021 – June 2021**
Content Based Car Recommender System
- Created two different systems to recommend a car to a user based on 7 different input parameters (year, cost, number of doors, etc...)
- Developed a k-means clustering algorithm where similarity scores were calculated using their Euclidean norm
- Implemented a PCA version (reduced number of features from 50 to 8) to recommend the user a car to compare to the initial model

Advanced Data Analysis   **Jan 2021 – Mar 2021**
Baseball Hall of Fame Classification Algorithm
- Designed multiple machine learning classification techniques to classify players as HOF inductees
- Used a KNN algorithm with hyperparameter tuning to account for the unbalanced classification labels
- Performed a cluster analysis to see which features hall of fame players had in common

Certifications and Technological Skills
- Microsoft Azure Data Fundamentals DP-900   Date Obtained: **Dec 2021**
- Programming Languages: Python, R, C++, HTML/CSS, SQL
- Data Visualization: Tableau, RShiny, Python Flask, Microsoft PowerBI
- Database Management: MySQL, NoSQL
- MS Office: Access, Excel, PowerPoint, Word
- Parallel Computing: Amazon EC2, Hadoop Ecosystem (Hadoop Steaming, PIG, HIVE, Spark, Mahout, Storm, Zookeeper)
- Machine Learning Libraries: TensorFlow and Scikit-Learn
- Web Scraping Dynamic and Static Websites

Personal Skills
- Fluent in English and Spanish
- Public Speaking
- Time Management
- Diligent Worker

Other Work Experience
Soccer Shots, Pittsburgh, PA
Youth Soccer Head Coach   **Sep 2017 – Jan 2020**
- Instructed children from various backgrounds and age groups to work as a soccer group
- Sustained a safe environment while maintaining an energetic and fun atmosphere
- Participated in volunteer and community engagement events in the greater Pittsburgh area