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## Education

### Bachelor of Science in Data Science - Seton Hill University

Greensburg, PA, May 2025

Cumulative GPA: 3.7/4.0 Department GPA: 3.6/4.0 Dean's List: Spring 2022, Spring 2024, Fall 2024

Honors: Academic Scholarship NCAA DII Men's Soccer Team Athletic Scholarship

Relevant Coursework: Probability & Statistics II (calculus-based probability), Algorithms Analysis, Mathematical Modelling, Graph Theory, Applied Statistics & Modelling, Linear Algebra, Calculus III, Numerical Analysis

### M.S. in Applied Mathematics & Statistics – Stony Brook University

Expected Start Date: Aug 2025

## Work Experience

### Data Analytics Marketing Intern for CMMB

Sep 2024-Mar 2025

- Develop customer segmentations using clustering and statistical analysis for targeted marketing campaigns
- Calculate and analyse key metrics, including Customer Lifetime Value (CLV) and donor retention rates
- Optimize database structure and clean data to prepare for seamless integration with Power BI dashboards

## University Experience

### Captain of Men's Soccer Team

Jan 2024-Dec 2024

- Assist with the management of the team, while facilitating additional practices and workouts
- Best team performance since the inception of the program (10-5-4)

### Head Resident Assistant

Aug 2023-Present

- Perform progress reviews of Resident Assistants
- Resource management for Residence department offices

### Fundraising Coordinator

Aug 2023 & Aug 2024

- Project management experience in leading twelve members over a four-month period
- Coordinated University wide fundraiser for breast cancer awareness in 2023 and 2024 raising over \$1500

### Statistics/Programming/Data Analytics Tutor

Aug 2024-Present

Statistics: Introduced topics in probability theory, regression analysis, hypothesis testing with a scientific or business approach to leverage statistical principles in solving problems

Programming: Instructed Python, R, and MATLAB programming languages in project-based assessments with focus on data science applications; implemented Pandas, NumPy, Matplotlib, dplyr, and ggplot2

Data Analytics: Introduced descriptive/inferential statistics, data visualization, and analysis using Excel

## Related Project Experience (See GitHub)

### EY Data Challenge: Predicting Urban Heat Islands (Python)

Jan 2025-Mar 2025

- Developed an Urban Heat Island predictive model ranking 86<sup>th</sup> out of 2000+ teams
- Utilized a Random Forest with Bayesian Optimization to achieve an  $R^2$  of 0.9606
- Integrated satellite imagery and geospatial data using Earth Science APIs, leveraging computer vision

### Enhancing Technical Analysis with Data Science (Python)

Jun 2024-Dec 2024

- Evaluate success of Technical Analysis investment strategy across sector ETFs during different business cycles
- Optimize technical analysis techniques by using hyperparameter tuning, showing 2% improvements over 90 days
- Developed a hybrid RSI-Bollinger Bands strategy, outperforming Buy and Hold Strategy by 10% over 90 days

### Assessing the Predictability of Life Expectancy (Excel/Python)

Nov 2024- Dec 2024

- Using WHO socioeconomic data to predict the life expectancy of countries in 2015
- Parametric and non-parametric statistical tests: ANOVA, Mann-Whitney U Test
- Multiple linear regression with 0.87  $R^2$  accuracy predicting life expectancy

### Maryland Automotive Industry Analysis & Forecasting (Python)

Jan 2024-May 2024

- Seasonal decomposition of time series data to use as a basis for mathematical modeling of sales
- ARIMA/SARIMA/SARIMAX models integrating macroeconomic conditions
- Identified underlying sinusoidal pattern in car sales because of changing macroeconomic conditions

## Skills

Languages: Python (Scikit-Learn, Pandas, NumPy), MySQL, R (ggplot2, dplyr), MATLAB, Excel (pivot tables)

Numerical Methods: Numerical Linear Algebra, Differential Equations, Monte Carlo Simulations

Advanced Tools: Gradient Descent, Reinforcement Learning, Neural Networks, Random Forests, Gradient Boost

Soft Skills: Project Management, Communication, Teamwork, Time Management