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**OBJECTIVE**

I'm an aspiring data scientist with a strong foundation in mathematics and computer science, seeking a position to apply machine learning and data analytical skills.

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**EDUCATION**

<b>Bachelor of Science in Mathematics with a minor in Computer Science</b>	May 2025
University of Central Florida – Orlando, FL	

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**Experience**

<b>Undergraduate Research Assistant</b>	May 2024 – Present
Department of Mathematics – University of Central Florida	

- Studied and developed efficient techniques to solve complex mathematical problems related to sound waves interacting with objects. (This is important in fields like sonar, medical imaging, and non-destructive testing.)
- Developed preconditioning techniques to accelerate iterative solvers (e.g., GMRES) of integral equation formulations of acoustic forward and inverse scattering problems.
- Leveraged Python and MATLAB computer languages to run numerical simulations on high-dimensional matrices of wavelength data to analyze and test the speed and efficiency of domain decomposition preconditioners.

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**PROJECTS**

<b>Logistic Regression and Feature Engineering Project</b>	13 Mar 2023 – 3 Apr 2024
University of Central Florida	

- Developed a logistic regression model to predict wine quality based on key features such as acidity, sugar, pH, and alcohol content
- Applied advanced data science techniques including KMeans Clustering, Principal Component Analysis (PCA), Hierarchical Clustering, and DBSCAN for comprehensive feature engineering
- Utilized scikit-learn and visualization libraries to extract and present actionable insights from a large data matrix of 6,498 records and 13 fields, enhancing model interpretability

<b>Exploratory Data Analysis Machine Learning Project</b>	19 Jan 2023 – 15 Feb 2023
University of Central Florida	

- Engineered a machine learning pipeline for exploratory data analysis on a start-up dataset of 924 records and 28 fields, addressing data quality issues such as missing values and outliers
- Conducted thorough analysis of data distributions and correlations, informing model selection and feature engineering
- Implemented decision trees and random forest boosting algorithms for both classification and regression tasks, achieving significant performance improvements

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**SKILLS**

- Programming Languages: Python, MATLAB, PowerShell, Java, C++, C#, SQL, HTML, JavaScript.
- Machine Learning and Data Science: Proficient in supervised and unsupervised learning, model evaluation, and feature engineering.
- Data Analysis: Experienced in data preprocessing, exploratory data analysis (EDA), and statistical analysis.
- Tools and Libraries: Scikit-learn, PyTorch, NumPy, Pandas, Matplotlib, Seaborn, Jupyter Notebooks.
- Analytical Skills: Strong problem-solving, critical thinking, and analytical abilities.
- Communication: Excellent verbal and written communication skills.