Jacob Edwards

Professional Summary

I am a detail-oriented and analytical professional with a Bachelor of Science in Geographic Science from James Madison University and currently pursuing a Master's in Applied Artificial Intelligence at the University of San Diego. My academic background includes work leading research and projects in GIS, AI, and data science with a strong emphasis in emerging technologies and statistical analysis. My professional background includes project management, customer service, and sales. I have developed a versatile portfolio of projects in Applied AI which upon request can be made available. I am seeking a role that leverages my knowledge in cutting edge AI/ML and GIS capabilities and my skills in business management and communication. **Currently relocating to the Northern Virginia/D.C. area.**

Education

Master of Science, Applied Artificial Intelligence, *University of San Diego* 08/2026
San Diego, CA

Advanced degree focused on practical AI and machine learning applications, covering predictive modeling, data analytics, ethical AI practices, and real-world problem-solving through advanced computational methods.

Bachelors of Science, Geographic Science, *James Madison University* 08/2019 – 05/2023
Harrisonburg, VA

Interdisciplinary program emphasizing geospatial data analysis, spatial modeling, cartography, environmental GIS applications, and practical GIS technologies including ArcGIS Pro and Python scripting.

Professional Experience

Sales Management, *Enterprise Mobility* 01/2024 – 08/2024
Charlottesville, VA

- Analyzed sales and financial data to drive profitability and improve customer satisfaction.
- Drove business development through direct sales generation and customer relationship building.
- Managed daily rental operations, including vehicle inventory, customer interactions, and conflict resolution.
- Collaborated with team members to exceed branch goals and drive process improvements in Enterprise’s business both in customer service and operations.

GIS Project Intern, *Nature Trust Malta* 05/2022 – 06/2022
Valletta, Malta

- Led a team project supporting green infrastructure initiatives across Malta using GIS and python to analyze environmental data and create an interactive Story map in ArcGIS Online, significantly enhancing public engagement and informing sustainability planning.
- Conducted spatial analysis and mapping to identify optimal locations for environmental conservation projects.
- Collected, processed, and analyzed geospatial data to inform sustainability planning and policy recommendations.

Legal Correspondence Intern, *Central Legal Aid Society* 04/2019 – 05/2019
Charlottesville, VA

- Led front office operations, which included maintaining clients relationships, managing requests for legal information, and managing multiple executives schedules and timelines.
- Assisted clients with intake procedures and provided general information on legal aid services optimizing customer experience and company procedures.

Projects

Predicting Traffic Accidents Using Machine Learning

This project employed advanced machine learning techniques, including Logistic Regression, Random Forest, and XGBoost, to predict traffic accident severity in California, New York, and Florida. Rigorous data cleaning, exploratory data analysis, and inferential statistical tests identified critical influencing factors such as time of day, road infrastructure, and visibility conditions. Contrary to common assumptions, adverse weather had minimal impact, whereas poor visibility and road infrastructure like intersections significantly influenced severity. XGBoost emerged as the superior model, demonstrating higher accuracy and precision in classifying severe accidents compared to Logistic Regression and Random Forest. This study provides actionable insights for policymakers and urban planners, recommending improvements in lighting, signage, and traffic signal enforcement to reduce accident severity.