Lucia Raciti

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EDUCATION

University of Notre Dame | Notre Dame, IN — May 2027
Bachelor of Science — *GPA: 3.9*
Major: Computer Science
Study Abroad: Dublin, Ireland — May-June 2024

Saint Mary's College | Notre Dame, IN — May 2026
Bachelor of Science — *GPA: 4.0*
Major: Mathematics

TECHNICAL SKILLS

Programming: Python, C, R, MATLAB, Excel – applied in data analysis, machine learning, and visual models
Data Analysis: Skilled in statistical modeling, multivariate calculus, and visualization for complex datasets

UNIVERSITY PROJECT EXPERIENCE

Mathematical Research | Saint Mary's College — January 2024 – Present
Research Assistant

- Analyzed 500+ data points on woodpecker populations, applying six different machine learning algorithms in Python to identify correlations between climate patterns and species decline
- Optimized predictive accuracy by refining model selection, contributing key insights to conservation research
- Presented findings at the Join Mathematics Meetings (JMM) Conference, engaging with 30+ researchers to discuss biodiversity trends and the adaptations occurring because of climate change

Mathematical Contest in Modeling | International Competition — January 2025
Team Member

- Developed a mathematical model integrating differential equations, statistical analysis, and optimization techniques to assess sustainable tourism practices
- Conducted an in-depth literature review and data analysis, refining assumptions to improve predictive outcomes
- Complied research into a LaTeX report, strengthening model-based decision-making for tourism sustainability

Sustainable Farm Market Analysis | Saint Mary's College — Dec 2024
Team Member

- Applied R-based statistical modeling and hypothesis testing to evaluate market accessibility and community impact
- Identified key consumer behavior trends through data visualization, changing complex datasets into clear insights
- Delivered data-driven recommendations to stakeholders, leading to more targeted outreach initiatives

Flappy Bird | University of Notre Dame — Dec 2024
Programmer

- Developed a functional Flappy Bird game in C using gfx2.h, using real-time graphics to render smooth animations
- Leveraged structured programming techniques and dynamic memory allocation for efficient resource management

LEADERSHIP AND ACTIVITIES

Nebraska Conference for Undergraduate Women in Mathematics — January 2025
Attendee

- Participated in networking sessions, engaging with leading mathematicians in research-driven career paths
- Strengthened analytical skills through discussion on applied mathematics and industry innovations

Women in Computer Science Club | University of Notre Dame — August 2023 – May 2024
Volunteer Coordinator

- Spearheaded a "Girls Who Code" chapter at Riley High School, mentoring four students through interactive coding workshops in Python, JavaScript, and p5.js
- Designed engaging lesson plans that increased student participation and built foundational coding skills