

Brandon E Martinez

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EDUCATION

BS in Computer Science, *University of Notre Dame*

Notre Dame, IN

Minor in Engineering Corporate Practice

May 2027

Relevant Coursework: Data Structures, Systems Programming, Linear Algebra, Intro to Artificial Intelligence

EXPERIENCE

Coaction Speciality

Morristown, NJ

Business Solutions Extern

June 2025

- Gained exposure to enterprise-scale insurance technologies, including Azure DevOps workflows, Microsoft stack front-end tools, and business solutions software portals
- Observed cross-functional collaboration between IT, actuarial, and software engineering teams; identified key skills and relevant technologies

Domer Rover

Notre Dame, IN

Autonomous Navigation Research

January 2024

- Deployed **C++** image recognition systems using **YOLOv8** on NVIDIA Jetson Nano hardware for autonomous missions
- Implemented GNSS/IMU sensor publishing and subscriber nodes in **ROS 2** (C++, Python, serial, rclpy), enabling real-time data streams for path planning and autonomous navigation
- Designed deserialization methods of NMEA protocol GPS sentences for motor board instructions needed for antenna rotation computations and functionality
- Deployed ArUco marker detection modules in **Python** with **OpenCV** 4.11+ for pose estimation
- Contributed to a **15%** improvement in Search and Rescue evaluation performance

PROJECTS

ND Data Club

P&G Project Member

August 2024

- Developed scalable sentiment analysis models on **17,000+** real-world product reviews using VADER and RoBERTa classifiers in **Jupyter** Notebooks
- Applied data preprocessing (pandas, numpy), TF-IDF tokenization, and log transformations to optimize Naïve-bayes and Logistic Regression model implementation and performance
- Achieved up to **85%** predictive accuracy, presenting results using visual libraries (Matplotlib and Seaborn)

Personal Portfolio Website

August 2024

- Developed responsive personal website with React.js, CSS, and **JavaScript**; enhanced with GSAP and ScrollMagic animations for smooth user interaction

C Linux

February 2025

- Developed a collection of Linux utilities and system tools in **C**, reimplementing core **Unix** commands to deepen understanding of systems programming concepts
- Implemented programs involving file I/O, string manipulation, memory management (heap, stack, dynamic allocation), signal handling, and socket communication

Robotic Football Club

Software Team Member

March 2024

- Automated “pre-snap” positioning via Arduino controller scripts and Unix shell scripting, enhancing robot team coordination

TECHNICAL SKILLS

Languages: C/C++, Python, JavaScript, TypeScript, HTML, CSS, MATLAB

Frameworks: React.js, Node.js, OpenCV, PyTorch

Tools: Bourne Shell (sh), Git, Github, JupyterLab, ROS-2, Vim, Unix/Linux, Docker