André Miller

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Education

Carnegie Mellon University, Pittsburgh, PA 2023-2027
B.S. in Information Systems GPA: 3.39/4.00
Notable Coursework: Fundamentals of Programming and Computer Science, Data Structures and Algorithms, Probability and Statistical Inference, Linear Algebra and Vector Calculus, Discrete Math
Extracurriculars & Accolades: Product Management Academy, Business Technology Group, Sigma Phi Epsilon Fraternity, Spanish and Latin Student Association, TartanHacks 2025 4th place overall

Skills

Technical: Python, C, R, SQL, Arduino (C++), LaTeX, MATLAB, tensorFlow, SOLIDWORKS
Languages: English (Native), Spanish (Native)

Work Experience

Carnegie Mellon University, Pittsburgh, PA **Aug 2024 - Dec 2024**
Teaching Assistant

- Worked as a Lab Teaching Assistant for 24-101 Fundamentals of Mechanical Engineering
- Guided students through projects covering gear systems, fluid mechanics, and control systems
- Collaborated in hosting office hours and addressed student inquiries regarding projects

Projects

American Sign Language Robotics - TartanHacks 2025 **Feb 2025-Feb 2025**

- Applied existing hardware to create a robot capable of communicating with user in basic ASL
- Received input from a webcam to recognize ASL alphabet symbols with Google Mediapipe API
- Utilized LLM to generate appropriate responses for the robotic hand to sign
- Designed and created rig for robot movement, for more complex motion allowing for more advanced signing
- Placed 4th/176 teams

Mason Bee House **Sep 2024 - Nov 2024**

- Synthesized 5 main client requests of solitary bee housing on a property by identifying unmet needs of the in-use houses to build a creative and functional new house design.
- Researched demands for survival as well as common causes of death in solitary mason bees.
- Used research to determine proper measurements, shape, and geographic positioning of the house in order to maximize bee survival and reproduction rate.
- Improved client satisfaction and increased end-product quality by collaborating with stakeholders to iterate on design concepts and incorporate feedback.

Arduino Robot Pathfinding | **Apr 2024 - May 2024**

- Assembled and programmed an Arduino robot capable of autonomously navigating and adapting to mazes with varying configurations
- Utilized ultrasonic and line-following sensors for real-time obstacle-detection