Miguel Garcia

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EDUCATION

BS in Computer Engineering & Applied Mathematics Minor, New Jersey Institute of Technology *Sept 2022 – Dec 2026*

EXPERIENCE

Full Stack Software Development Co-op, Verizon - Basking Ridge, NJ Jan 2025 – June 2025

- Developed a scalable, modular framework to manage AI agents across diverse business use cases.
- Engineered a multi-agent conversational system with layered NLP logic, enabling agents to collaborate before responding for improved contextual accuracy.
- Designed and deployed a React.js front end to facilitate interactions with AI agents and display contextual responses.
- Implemented a Node.js and MongoDB backend to manage state, user sessions, and dynamic content updates.
- Integrated front-end and back-end systems to deliver a seamless, adaptive voice assistant experience using HTML, CSS, and JavaScript.

Electronic Arts Software Engineering Program, Forage - Remote March 2025

- Proposed a new feature for the EA Sports College Football and wrote a Feature Proposal.
- Built a class diagram and created a header file in C++ with class definitions for each object.
- Patched a bugfix and optimized the EA Sports College Football codebase by implementing an improved data structure.

Global Network & Technology Performance Intern, Verizon - Hempstead, NY June 2024 – Aug 2024

- Optimized information and data for Verizon Fios fiber optic communication systems.
- Collaborated directly with Verizon Engineers to ensure data integrity and system performance.
- Developed workflows resulting in the update of over 1,350+ addresses and 2,000+ Builder Drivers for 2024.

Data Entry Intern, Hispanics Inspiring Students' Performance and Achievement - Remote June 2023 – July 2023

- Optimized workflows to improve information management using Salesforce.
- Organized 10 years of Excel data, updating records for 60+ companies.
- Streamlined data systems to support faster access and analysis.

PROJECTS

RayTracer in C++ | C++, Custom-built math/vector libraries

- Building a path tracer in C++ that simulates realistic lighting effects including shadows, reflections, and indirect illumination.
- Applying vector mathematics, and operator overloading to design ray-object intersection logic and recursive light transport.
- Optimizing performance using spatial partitioning techniques and modular class structures for extensibility and maintainability.

3D Rube Goldberg Machine in Unreal Engine | Unreal Engine 5, C++

- Designing an interactive 3D Rube Goldberg machine in Unreal Engine as part of a hands-on externship challenge.
- Focused on game design, physics-based mechanics, and creative storytelling to build engaging chain-reaction sequences.
- Iterating on level design using Blueprint and C++, gaining hands-on experience with AAA development tools and workflows.

Real-Time Obstacle Avoidance System | Python Scripting, Jetson Nano, Sockets, Computer Vision

- Architected a real-time obstacle avoidance system leveraging Jetson Nano's object classification model.
- Integrated a Pygame-based simulation with a custom socket server-client architecture for dynamic interaction.
- Implemented dynamic path adjustments by utilizing live camera data and classified object insights for real-time avoidance.

LEADERSHIP

External VP Committee Officer, Society of Hispanic Professional Engineers - Newark, NJ *Sept 2024 – Dec 2024*

- Assisted the NJIT External Vice President in developing and maintaining relationships with sponsors and corporate partners.
- Coordinated a partnership with Microsoft HOLA to deliver a professional development session for our SHPE chapter.

NJ Governor's Fellow, Center for Hispanic Policy, Research and Development- Remote *June 2023 – July 2023*

- Led an 8-member team in a 8-week CHPRD NJ Fellows Project, developing HISPA's strategic plan for political outreach.
- Volunteered as a role model for HISPA, speaking in underrepresented communities to inspire students.

TECHNICAL SKILLS

Programming Languages: Python, C/C++, MATLAB, JavaScript, HTML, CSS
Frameworks & Tools: React.js, Git, Jira, Ubuntu, Docker, MongoDB, Node.js, Mongoose, Unreal Engine 5
AI & Machine Learning: Real-time classification, Object detection (DetectNet, TorchVision), Computer Vision, NLP