Miguel Garcia

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EDUCATION

New Jersey Institute of Technology, B.S. in Computer Engineering, GPA: 3.16 / 4.0 *Sept 2022 - Dec 2026*
Relevant Coursework: Operating Systems, Computer Organization, Applied Machine Learning, Calculus 3, Linear Algebra
Member: SHPE, CodePath, ColorStack, ALFPA, Hispanics Inspiring Students' Performance and Achievement

TECHNICAL SKILLS

Programming Languages: Python, C/C++, 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

WORK EXPERIENCES

Verizon **Basking Ridge, NJ**
Full Stack Software Development Co-op | JavaScript, HTML, CSS, React.js, Node.js, MongoDB, Git, Jira *Jan 2025 - Present*
- Built a scalable, modular framework to control and manage AI agents for three distinct business solutions/use cases.
- Developed a multi-level conversational agent system, integrating natural language processing (NLP) techniques to enhance user interaction and engagement.
- Researched problem statements and presented the solution to senior leadership, teammates, and key stakeholders.

Forage **Remote**
Electronic Arts Software Engineering Program | C++, Debugging *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.

Verizon **Hempstead, NY**
Network Performance Intern *June 2024 - Aug 2024*
- Collaborated closely with Verizon Engineers to optimize information and data for Verizon's fiber optic communication systems also known as FIOS.
- Created workflows that resulted in the update of over 1350+ addresses and 2000+ Builder Drivers for 2024.

PROJECTS

RayTracer in C++ | C++, Custom-built math/vector libraries *May 2025 – Present*
- Building a path tracer in C++ that simulates realistic lighting effects including shadows, reflections, and indirect illumination.
- Applying vector mathematics, and operator overloadings 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++ *April 2025 - Present*
- 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 Origin Nano, Sockets, Computer Vision *Nov 2024 - Dec 2024*
- Developed a real-time obstacle avoidance system by integrating Jetson Nano's object classification model with a Pygame-based simulation and socket server-client architecture.
- Implemented live data transmission between the Jetson Nano and the simulation to enable responsive, AI-driven path adjustments.

LEADERSHIP

Society of Hispanic Professional Engineers **Newark, NJ**
External Vice President Committee Officer *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.

Center for Hispanic Policy, Research and Development **Remote**
NJ Governor's Fellow *June 2023 – July 2023*
- Led an 8-member team in an 8-week CHPRD NJ Fellows Project to develop and present a strategic plan adopted by HISPA to engage political stakeholders and expand its outreach.