DOMENICA SIMBANA MOSQUERA

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EDUCATION

University of Florida   **May 2026**
Bachelors of Science in Computer Engineering, Herbert Wertheim College of Engineering   Gainesville, FL
Relevant Coursework: Data Structures and Algorithms, Discrete Structures, Intro to Computer Organization, Computational Linear Algebra, Digital Logic, Microprocessors, Cross-Cultural Engineering, Performative Programming

University of Florida   **May 2024- Jun 2024**
UF in Japan Cross Cultural Engineering Program, Kyoto University   Kyoto, JP

PROJECTS

StudioA | *THREE.js, SQL, Blender, Figma, Spotify API, HTML/CSS, JavaScript*   **Dec 2024- Present**
- Developed a 3D modeling website using THREE.js and Blender to help dancers prepare for battles through dynamic genre exploration
- Built a backend with SQL and Spotify API to analyze listening habits, exclude familiar genres, and suggest challenging tracks while providing musical summaries and dancer recommendations
- Designed an intuitive UX/UI in Figma, ensuring a seamless experience for dancers training with interactive 3D elements

Prospera (ShellHacks 2024 1st Place Vanguard Winner) | *ReactJS, TailWind, Vite, Figma, OpenAI API*   **Sep 2024**
- Developed a financial literacy platform designed to empower immigrant families by simplifying their financial journey, using React, Vite, and Tailwind CSS to deliver a seamless user interface
- Designed Foxy, a friendly avatar that visually represents users' financial status, designed to reduce stress around finances by offering a clear, engaging, and approachable way to track financial progress
- Integrated OpenAI API to build an interactive chatbot for personalized financial guidance, providing actionable tips to improve users' financial habits and track progress through a unique scoring system

KeroKero | *.NET MAUI, XAML, Figma, Google API, C#*   **May 2024- Jun 2024**
- Developed an app for Kyoto residents using .NET MAUI, C#, and XAML to provide evacuation routes, disaster preparedness checklists, file uploading, and notification alerts
- Collaborated with UX/UI designers to implement accessible and user-friendly designs across multiple platforms
- Worked with Kyoto University students to research residents' needs for human-centered design through surveys and research

EXPERIENCE

Active Perception and Robot Intelligence Lab   **Sep 2024- Present**
Undergraduate Research Assistant   Gainesville, FL
- Developed indoor environment simulations by collecting 200+ images and using Neural Radiance Fields (NeRF) to predict unseen pixels for enhanced scene reconstruction
- Integrated NeRF simulations into the HoloOcean robot to improve pathfinding algorithms and autonomous navigation in complex indoor spaces

LEADERSHIP & INVOLVEMENT

UF SwampHacks   **May 2024- Present**
Lead Director of Marketing   Gainesville, FL
- Led marketing initiatives for UF's largest student-led hackathon, building connections with student organizations and Florida hackathons while designing sponsorship packets, flyers, and merchandise in Figma to boost attendee registration
- Managed a team of three marketing directors to execute campaigns that grew applications to 700, resulting in 73 project submissions, and developed a comprehensive strategy leveraging social media and UF partnerships to maximize engagement

Society of Hispanic Professional Engineers   **Sep 2023- Apr 2024**
Autonomous Vehicle Design Team   Gainesville, FL
- Engineered an autonomous vehicle integrating Raspberry Pi for processing and control, utilizing SolidWorks for 3D design, and employing 3D printing technology to create custom parts
- Implemented a Pi camera for obstacle detection and infrared sensors for line following capabilities, prioritizing navigation

UF Hispanic Student Association   **Jun 2023- Apr 2024**
Webmaster   Gainesville, FL
- Utilized Figma to ideate website design concepts that prioritized providing resources to the Hispanic student population on campus
- Communicated with 20+ affiliated organizations of the Hispanic Student Association to update event dates and program deadlines on website design

AFFILIATIONS AND SKILLS

Languages: English and Spanish
Hackathon Awards: ShellHacks 1st Place Winner for Vanguard