

Jonathan Alexander Sanchez

Education

Bachelor of Science with Honors.....**University of Memphis**

Expected Graduation: December 2028

Major: Computer Science (Concentration: Artificial Intelligence)

Minor: Entrepreneurship

GPA: 3.96

Technical Skills

Languages: Python (Proficient), C# (Proficient), HTML5/CSS3 (Proficient), JavaScript (Novice), C++ (Novice), MATLAB (Novice)

Developer Tools: Git & GitHub, Pulsar & Visual Studio Code, Unity, Blender

Certifications: CompTIA (ITF+)

Frameworks/Services: Flask, SMTP, Cesium for Unity, Google Cloud Platform API

Miscellaneous: Prompt Engineering, Arduinos & General Electronics

Relevant Work Experience

VR Fault & Seismicity Visualization Intern Developer (June 2026 - August 2026)

Center for Earthquake Research and Information (University of Memphis)

- Built a Unity 6 application from scratch that streams photorealistic 3D terrain (Cesium for Unity) and overlays real fault and seismicity datasets with Desktop and VR compatibility
- Designed and implemented a geospatial data pipeline (MATLAB, Blender, Unity) that converts raw fault and seismic data (400+ faults and 1.6M+ earthquakes) into 3D mesh geometry
- Created an artificial underground mode that was not supported by Cesium at the time of development
- Developed a region-switching system (San Andreas & New Madrid) using clipping polygons & raster overlays, as well as a runtime settings UI (dropdowns, toggles, data layers) that handles a city label system, optimized for performance
- Iterated features through testing cycles, keeping detailed documentation of design decisions, bugs, and fixes from the project's development

Personal Projects

Partner Management System.....**Python, Flask, Google Cloud Platform API, HTML/CSS**
(January 2024 - June 2024)

- Developed and designed a full-stack web application to manage organizational partner data as a replacement for manual spreadsheet management
- Stored data persistently in a local JSON file using Python/Flask to handle CRUD operations
- Integrated Google Sheets API to automatically update partner data upon any modifications, allowing for real-time backup
- Implemented quality-of-life search and filter features into the user interface to improve user experience
- Created a custom audit system that records all user actions with timestamps as a form of data integrity

**Automated Invoice Generator.....Python, Google Sheets API, SMTP, FPDF
(May 2025 - August 2025)**

- Created a fully automated system that connects Google Forms, Google Sheets, and Gmail to create and send invoices to clients
- Used a Google Form as the front-end data collector, which then sends work details, descriptions, and costs in real-time to a Google Sheet
- Automated the delivery portion by using Gmail's SMTP server, removing the need for manual file handling