

Nathaniel Joseph

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EDUCATION

University of Miami, Coral Gables, Florida

May 2025

Bachelor of Science, **Computer Engineering & Computer Science**, Minor in Communication

Relevant Coursework: Algorithms; Augmented Reality; Cybersecurity; Data Structures; Electronics; Processors: Hardware, Software, and Interfacing; Structured Digital Design; Systems Programming

SKILLS

Languages: C++/C/C# (proficient), Assembly (competent), VHDL (competent), Bash (competent), Python (competent), Java (novice), HTML/CSS (novice)

Frameworks / Technologies: Apple ARKit & RealityKit, AWS, DE1-SoC Dev Kit, ESRI, Git, Google ARCore, iOS, Jira, Kali Linux, ModelSim, MRTK, PSpice, Quartus Prime, TensorFlow, Unity/MARS, UNIX, Xcode, YOLO

RELEVANT EXPERIENCE

University of Miami Information Technology, Coral Gables, Florida

04/2022 - Present

Extended Reality Software Engineer

- Designed, developed, tested, and deployed augmented reality applications using Magic Leap headsets, Unity, and C# in an Agile workflow.
- Gained proficiency in using MRTK and Unity MARS to create headset and mobile-based AR applications.
- Core developer of an iOS application that uses YOLOv8 computer vision technology to scan food and accurately return its macronutrient data with respect to portion size. Uses a self-trained database of over 120 thousand food images with hundreds of food options that are scannable, accurate, and allows for user data correction.

The Singular Factory, Miami, Florida

05/2022 - 08/2022

Software Engineer Intern

- Utilized ArcGIS mapping software in conjunction with Unity to build a mixed reality application with real-world raised-relief (3D) mapping capability, called HoloGIS.
- Efficiently worked with textures, tiles, and the GPU to understand and take advantage of the inner workings of graphics, how the map rendering works, and how/where data flows to/from the cache.
- Learned to manipulate graphics information and cache to merge information from two different applications to create new application functionality.

EXTRACURRICULAR ACTIVITY

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| • National Society of Black Engineers , Senator | • Caribbean Students Association |
| • Google Developer Students Club | • Boxing Club |
| • Unity Junior Programmer | • Pi Kappa Phi Fraternity |

ADDITIONAL INFORMATION

Professional Affiliations: ColorStack (Member), eMerge Americas (2022 & 2023 Attendee), Live! 360 Orlando (2022 Attendee, AI Track)

Languages: English (native), Haitian Creole (fluent), Spanish (fluent), American Sign Language (proficient)

Personal Interests: Vinyl collecting, Manga, Social activities, Sports (basketball, football, MMA, esports, chess), DJing