

Ahmed Mansour

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EDUCATION

University of Central Florida

Masters of Computer Science

August 2023 - April 2025

- Specialization in web-based XR platform development, focusing on **WebGL**, **WebXR**, and cross-platform performance optimization for immersive AR/VR applications.
- Earned the **ORCGS Fellowship**, developing novel applications in the Mixed Reality space, utilizing AR glasses and holographic displays using both native (**C++**) and engine-agnostic (**Unity/Unreal**) pipelines.

Mixed Reality Engineering Certificate

April 2024

- Completed courses in Virtual Reality, Augmented Reality, and a capstone Mixed Reality Project.
 - Capstone included creating a full-stack **WebXR** demo integrating **Three.js**, **React**, and a custom **WebSocket** synchronization layer.

WORK EXPERIENCE

University of Central Florida

April 2023 – April 2025

VARLAB Graduate Research Assistant - ORCGS Fellow

Orlando, FL

- Conducted advanced Virtual & Augmented Reality research under the guidance of Dr. Carolina Cruz-Neira.
- Heavily utilized **Unity & Unreal Engine** to create mixed reality experiences for research or creative purposes.
- Built a novel user 3D interface as the Holosphere, a unique method of interaction within a Virtual Environment.
- Maintained communication with both on-site & remote teams to ensure efficient completion of work.
- Presented original research in conferences such as **ASEMFL** and **I/ITSEC**.

Lockheed Martin

May 2021 – February 2023

Level 2 Software Engineer

Orlando, FL

- Engineered and deployed full-stack features using **Java**, **TypeScript**, and **Angular**, enhancing system performance and user satisfaction.
- Remained in constant contact with US Air Force customers on requirements and showcased new features.
- Collaborated with fellow Software Engineers on features and System Engineers on proper testing procedures.
- Volunteered on a 4-month cross-program project for the US Navy, architected a containerized **Kafka** pipeline in **AWS** (Snowball Edge + EKS) to synchronize multisite environments and ensure 99.9% message delivery.

University of Central Florida

January 2020 – October 2020

Lockheed Martin College Work Experience Program

Orlando, FL

- Co-developed a **battlefield-ready** web application using **Angular** and **WebSocket** for low-latency mapping updates.
- Partnered with systems engineers to build a regression-testing suite utilizing automated testing scripts (**Robot + Jenkins**) that caught 87% of front-end defects before release.

PROJECTS

Wall of Fame

- **Architected** a **React + Three.js** web-based AR app that recognizes a physical mural (image-tracking via **AR.js**) and overlays interactive 3D scenes—with a focus on attractive design to enhance user engagement.
- Organized an effort to overcome design challenges, commission artists, and ensure accessibility of the art installation for years to come.

SolitudeVR

- Built a **C# Unity** experience leveraging **Vuforia's** Image Recognition for real-world triggers, then streamed audio-synchronized shaders via UDP to create a relaxing audio-based experience within a VR environment.

SKILLS & INTERESTS

- **Skills:** Programming experience in Java, Javascript/Typescript, C++, C#, Node.js, Python, Unity & Unreal. Experience with WebGL, WebXR, Three.js, AR.js. Proficient in Agile development, Scrum, & Git.
- **Interests:** Writing Music, Tennis, Mathematics, Science Fiction, Cooking, Geographic Information Systems.