



Mixed Reality Platform



NREIP
NAVAL RESEARCH ENTERPRISE
INTERNSHIP PROGRAM

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Project Objective and Intern Contribution:

Our aim was... To research, develop, and test AR Applications for the Navy. This required familiarization with 3D scanning using the ARTEC Leo, preparing the 3D renderings in Artec Studio, importing 3D objects + developing applications within Unity, and deployment using Visual Studio to the HoloLens 2.

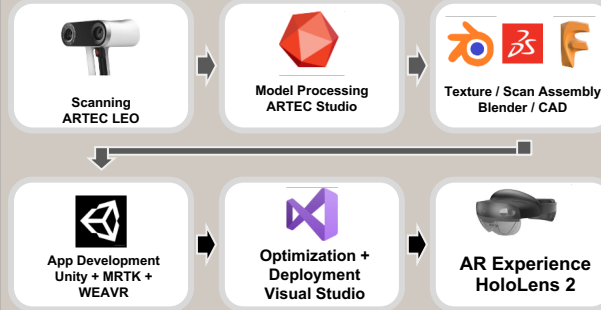
We were assigned to.... Within this project we helped program software and develop a mixed reality platform for proof-of-concept and testing purposes at NBVC Port Hueneme. We used a mixture of 3D Scanning technology and coding to construct object-based software models of real-world exemplars. We then programmed these objects to emulate basic functions.

Our contributions were.... We documented the steps that went into producing our platform, allowing us to produce a procedure which enables future personnel to quickly familiarize themselves with and participate in; the process that streamlines mixed reality application development for use.

The methods we used to accomplish this aim were...

Research, hardware testing, and software troubleshooting.

App development for HoloLens 2 using 3D Scanning



What are you most proud of this summer?

- Developed an Augmented-Reality environment using Unity
- Streamlined the process for future AR development

Why was the internship valuable?

- Hands-on experience in a Navy Laboratory
- Learned about real-world applications of Engineering and Navy technologies
- Networked with NAVSEA Engineers and professionals, learned about job opportunities

Advice for future cohorts?

- Do not hesitate to ask questions!
- Ask to work on projects that interest you
- Make connections with Navy personnel

Results:

- Documented an easy to follow procedure for 3D Scanning -> App Development -> HoloLens Application
- Created a demo application showcasing AR capabilities for Navy use

Accomplishments:

- Successful import of 3D scan to 3D object into Unity

Next Steps:

- Focus on App Development (Detailed AR Training, QR code recognition, AI integration, Part Inspection, etc.)
- Test WEAVR + SolidWorks integration

