Paul Merritt

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Work Experience

AR Development Support Specialist

NIST - New York, NY — **July 2024 - Present**

- Developed PLYColorParser, a Python/C# (Unity) tool that extracts and clusters colors from PLY/image files using silhouette-optimized k-means, returning dominant and WCAG-contrast-safe colors for UI design.
- Upgraded ARTV to Quest 3 with new GUIs and point cloud models.
- Built XRDM, a WebXR A-Frame experience embedded in Qualtrics to collect decision-making metrics in survey studies.
- Presented at FedCASIC 2025 on using WebXR to enhance remote research studies, showcasing our XRDM platform for immersive data collection within survey environments.

Technical Artist

Meta - New York, NY — **October 2022 - Present**

- Co-developed a variety of projects for Meta, contracted through Insight Global. Project details, purpose, and technologies are bound by NDA.
- Collaborated on AR filters and Snap lenses.
- Implemented features at request of project managers, analyzed and optimized software performance, and pitched solutions to UX concerns.
- Regularly participated in on-call rotation 3 days at a time.

Freelance AR Developer

Bolder Games - Remote — **August, 2022 - September 2022**

- Worked on a small team of developers operating in a SCRUM workflow on an Augmented Reality project. This project was for The Walt Disney Company, contracted through Bolder Games. Project details, purpose and technologies are bound by NDA.

AR Developer — **September, 2018 - October, 2022**

NIST - Boulder, CO

- Developed ARTV (Augmented Reality Tracking Visualization) which displays real-time tracking on 3D point clouds.
- Designed and co-designed several WebXR prototypes that stream IoT data via MQTT to an A-Frame scene display.
- Co-facilitated the CHARIoT Challenge, bridging IoT and AR industries towards improving a First Responder's performance.
- Used C# and Unity to build Augmented Reality (AR) programs for The National Institute of Standards and Technology's (NIST) Public Safety Communications Research Division (PSCR).
- Created and demoing POC-level training simulations for the Microsoft Hololens and Magic Leap One.
- Produced scenarios for the Vuzix Blade and iOS/Android to showcase the potential of AR in a variety of form factors.
- Constructed 3D models and their animations for the iOS/Android app.
- Worked alongside local and distant Fire Fighters and Bomb Disposal experts to isolate key needs in their fields.
- Demonstrated at CES 2019 and 2020, at our Public Safety Stakeholders Conference, and at our facilities in Boulder.

Software Development Intern — **May, 2017 - August, 2017**

City of Los Angeles ITA - Los Angeles, CA

- Used C# and Unity to build an AR app for the Information Technology Agency (ITA) for a project for the Los Angeles City Fire Department.
- Constructed 3D models and their animations for the program.
- Worked closely with the engineers at DAQRI during development.
- Collaborated with the City of Los Angeles QA team on testing plans.

Skills

Languages & Tech Stacks

TypeScript
React Native
A-Frame
AR.js
p5.js
ML5.js
C#
Java
C++
C
JavaScript
Node.js
HTML5
CSS
Python

Environments

Microsoft Azure AI
Meta Spark Studio
Unity
Maya
Git
MQTT
MS Office
Adobe Premiere
Adobe Photoshop
Audacity
OBS

Platforms

Meta Quest 3
Microsoft HoloLens
MagicLeap One
Vuzix Blade
iOS
Android
Web

Certifications

Azure AI Engineer Associate

May, 2024

Education

New York University, New York, NY

May, 2018

Bachelor's Degree: Computer Science
Minor: Game Engineering