Miru Jun

miru.sh | linkedin.com/in/miru-jun/ | 818-471-3263 | mirudjun@gmail.com

Active T3 Secret Clearance granted October 2023

Education

University of Southern California (USC) — CA — *2020 – 2024*

Bachelor of Science, Computer Science — Summa Cum Laude — *5/2024*

Minor in 3D-Animation in Cinematic Arts

Work Experience

Naval Surface Warfare Center (NSWC) Corona Division — Norco, CA — *5/2023 – Present*

Data Engineer/Scientist — *9/2024 – Present*

- Researched and applied **NLP and ML models** with **Python and SQL** in local, cloud (**Azure ML Studio**), and air-gapped environments with **sensitive data** , creating streamlined ML and data pipelines.
- Utilized **SQL** and **Python (pandas, numpy)** for preprocessing, profiling, and analyzing weapon systems data.
- Analyzed **Ardupilot flight data** for failure modes of system components to improve system reliability.
- Built **Streamlit, folium, PyDeck** analysis visualizations for **auto target CV models** in unmanned vehicle exercises.

Intern — *5/2023 – 8/2023*

- Built **Python package and PyQt6 GUI** for weapon system analysis with various ML models and sampling methods.
- Multiple design iterations with Navy analyst feedback to improve flexibility across systems.
- Contributed to a **HoloLens2** application enabling offline ship maintenance procedures.

Learning and Interactive Robot Autonomy Lab (LiraLab) — USC — *8/2023 – 5/2024*

Student Researcher

- Conducted research in physics-based **robot simulation environments** (Robosuite, Meta-World) and WidowX arm.
- Applied AI to improve robot trajectories with comparative language feedback (HRI'24 HIRL, CoRL'24).

Mobile and Environmental Media Lab (MEML) — USC — *8/2023 – 5/2024*

Student Researcher

- Built **geolocated WebAR app** on **8th Wall,** implemented over multiple design iterations.
- Handled UX (**A-Frame, JS**) and interaction with 2D/3D assets, leveraging event triggers and state machines.

Projects

Estuary – *Augmented Reality Companion Project* — *8/2023 – Present*

- Developed a modular, cross-platform, **client-server development framework** and **demo app** in **Unity** (Quest3, Apple Vision Pro) for real-time multimodal interactions with an XR AI agent.
- Packet streaming pipeline with **SocketIO** for STT to TTS (Whisper, GPT, ElevenLabs, and LipSync).
- Built mesh-aware navigation and semantic scene understanding using **Unity AR Foundation.**

NASA SUITS Challenge 2022/2023 – *AR App for NASA Student Challenge* — *1/2021 – 5/2023*

- Developed a **HoloLens2** app in **Unity** to assist astronaut EVA procedures, using **C#, Vuforia, MRTK2, and Python.**
- Real-time **WebSocket** telemetry streaming and AI integration across **Raspberry Pi, HoloLens2, and AI server.**

Cringe-Canon – *AI-Powered Original Character Generator* — *3/2025*

- Built a web app in **React and Flask,** enabling users to upload character art, descriptions, and camera snapshots.
- Utilized **RESTful APIs** to integrate VLM and image generation APIs to generate character profiles and images.

Skills

- **Languages:** Python, JavaScript, Java, C#, C++, C, SwiftUI, SQL.
- **Technologies:** Azure ML Studio, Docker, Kubernetes, Flask, React, Streamlit, Unity, Unreal Engine, 8th Wall, Xcode.
- **Publications:** CHI'25, IVA'24, CoRL'24, HIRL @ HRI'24, RAMS'24.