

Mattan Tseng

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Education

The University of Alabama in Huntsville (UAH) 2024 – 2025 (Expected)
- M.S. Electrical Engineering — GPA: 4.00/4.00
Iowa State University (ISU) 2020 – 2023
- B.S. Mechanical Engineering — GPA: 3.97/4.00

Experience

Graduate Research Assistant Huntsville, AL
Nonlinear and Complex Systems Lab (NACS-Lab) 2024 – present

- SMDC High Energy Laser Lab:
 - Performed novel research applying data driven modeling methods to chaotic semiconductor diodes
 - Automated experimental process for phase modulation tests of single mode fiber lasers
- Waveform Design:
 - Developed C++ blocks to visualize radar experiments with software defined radar (GNURadio)
- Continuous Time Digital Signal Processing:
 - Modeled real-world FPGA-based signal processing methods in MATLAB

AI/Autonomy: Machine Learning Engineering Intern Poway, CA
General Atomics Aeronautical Systems inc.(GA-ASI) Summer 2023

- Training Environment Enhancement:
 - Developed deterministic controller to speed up and diversify adversarial behavior
 - Utilized controller to begin benchmarking of reinforcement learning agent
- Development Research:
 - Performed stack tracing to discover and highlight problems in communication backend
 - Began preliminary literature search to expand knowledge base in state-of-the-art robustness methods

Undergraduate Research Assistant Ames, IA
Virtual Reality Applications Center (VRAC) 2020 – 2023

- Mixed Reality Demonstration Applications:
 - Developed Arduino system to wirelessly transmit passive haptic sensor feedback to Unity Game Engine
 - Stood up Unity project for immersive carrier application for 3D projection room
- DOT Snowplow Navigation:
 - Developed a Android-Unity application to aid snowplow drivers navigate in adverse weather
- Extended Reality (XR) Visual Acuity Toolkit:
 - Researched readability guidelines related to general digital media and XR
 - Developed an application (XRAE) to allow users to customize UI to their visual acuity needs

Publications

XRAE: Extended Reality Acuity Examination July 2023
Mattan Tseng, Jack Miller, Dante Goldner, Eliot Winer
<https://doi.org/10.1016/j.softx.2023.101429> [🔗](#)

Skills

Languages: Python, MATLAB, C#, C++

Technologies: git, Unity Game Engine, Docker, SolidWorks, Fusion 360, Adobe Illustrator