TOMER KRAYZMAN

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Education

Clearance: Secret

University of Maryland - College Park
- ► M.S. Computer Science *May 2022*
- ► B. S. Computer Science and B. A. Chinese *May 2021*

Experience

MITRE Corporation|*Software Engineer* *July 2022 - Present*
- ► Designed 3D room models and built a simulation tool in Unreal Engine 5, enablings users to create and test urgent care facility layouts with AI-driven NPCs. Mentored 3 interns who worked on this project
- ► Mapped and optimized controls for a remote controlled drone and submarine in a VR environment in Unreal Engine 5, designed and optimized a marine environment for the submarine to traverse
- ► Developed a new mixed reality SDK for Army headsets using Unity, performed field tests often and obtained user (Army) feedback to enhance need-based functionality of the SDK
- ► Created and optimized dynamic terrain and mesh generation of the Earth in Unity for a flight simulator. Designed and developed flight controls for the simulator as well

MITRE Corporation|*Software Engineer (Part time)* *May 2021 - May 2022*
- ► Developed an AR keyboard that is controlled by eye tracking sensors in the Hololens 2 using Unity, C#, and the Mixed Reality Toolkit (MRTK) alongside one other intern
- ► Enabled the program to grant the user the ability to type letters or premade words with only gaze/pupil movement and a physical 'select' button

Capital One|*Software Engineering Intern* *June 2020 - August 2020*
- ► Built and maintained a web portal to exist as a base of information for an internal hosting service operated by Capital One using Angular while improving site performance using Scully.io
- ► Constructed intake forms using the Angular CLI and connected the form to the Github Issues API to automate an existing onboarding process offered by an the hosting service
- ► Implemented CI/CD by creating unit tests for each new component added to the portal, managed and maintained test coverage by creating a pipeline using Jenkins and Jest

MITRE Corporation|*Software Engineering Intern* *June 2019 - October 2019*
- ► Developed new features for a dependency mapping tool used to manage government resources using Vue.js in a team of 3 developers
- ► Created data visualizations using D3.js for the mapping tool and an internal government search engine and successfully integrated a newly updated company-made framework

Projects and Research

Army Research Lab ORAU Fellowship |*Resesarch* *June 2021 - May 2022*
- ► Researched ways to integrate Human AI Teaming (HAT) in Army IVAS headsets by improving battlespace visualization in AR. Used the Battlespace Visualization Interface (BVI)
- ► Created simulations to be later integrated into AR headsets using Python and TensorFlow
- ► Publications: Novel AI Decisions Aids for Decision Dynamics, Deception, and Game Theory The Future of Collaborative Human-Artificial Intelligence Decision-Making for Mission Planning

Mixed Reality Exploration Toolkit (MRET)|*Research and Development* *December 2020 - May 2021*
- ► Researched ways to improve NASA's MRET, updated mixed reality UI and created new tutorials in Unity using C# to enhance userability while collaborating with a team of 4 other students
- ► Modified and adapted the toolkit to allow for use by both the HTC Vive and the Oculus Rift

Skills

- ► Proficient in Java, HTML/CSS/JavaScript, Angular, C#, SQL, MongoDB, C++, Python
- ► Python libraries: Tensorflow, scikit-learn, OpenCV, PyTorch, Cuda, CuPy
- ► Tools: AWS, Git, InVision, Adobe Photoshop/Illustrator, Unity 2D/3D, Blender 3D Modeling
- ► Foreign Languages: Russian, Hebrew, English, Spanish, Chinese, currently learning Hmong