Erdem Murat

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Education

George Mason University   **January 2022 – May 2023 (Expected)**
Master of Science in Computer Science   *Fairfax, VA*
- Member of the Design Computing and eXtended Reality (DCXR) research group.
- Leading member and Secretary of the Computer Science Graduate Students Association (CSGSA).

George Mason University   **August 2018 – December 2021**
Bachelor of Science in Computer Science   *Fairfax, VA*

Academic Research

Understanding User Experience of Online Education in Metaverse: A Systems Perspective   **November 2022**
- Built a Mozilla Hubs server-client system and wrote JavaScript scripts to record platform performance through API.
- Used Python and Jupyter Notebook to compute, visualize and analyze systems data.
- Gave a VR lecture to 23 Graduate students and later assisted a well-established researcher using my platform for a speech.
- Completed study with a total of 4 lectures in which qualitative user data & quantitative systems data have been recorded to document a detailed systems understanding of VR education and user experience through an academic paper.

Machine Learning Automation for Virtual Reality - Master's Thesis   **December 2022**
- Developed a system to address a limitation in VR development research and proposed a solution that improves user experience through both qualitative and quantitative user data collected.
- Used procedural game difficulty design to generate various game levels to better understand and test the relationship between game parameters and user experience.
- Obtained IRB certificate for social and behavioral research and collected data from over 50 users playing my VR game.

Experience

Design Computing and eXtended Reality (DCXR)   **January 2022 – Present**
Virtual Reality Researcher, Lab Member   *George Mason University*
- Advisor: Prof. Lap-Fai (Craig) Yu
- Through DCXR, I have engaged in three different academic research projects so far.
- As a member of the lab, I am able to receive mentorship from Prof. Yu, collaborate with lab members, access equipment required for research, and attend seminars, conferences, and related events.

Global Co Lab Network   **July 2022 – Present**
Virtual Reality Director   *Arlington, VA*
- Developing and maintaining VR Hubs for the Co Lab to host conferences and present fieldwork addressing social issues.
- Instructor and mentor for three teams participating in the UN Sustainable Development Goals (SDG) Metaverse Competition where contestants develop their own VR environments to address to an SDG.

Reviewer   **January 2023**
IEEE VR 2023

Cyber Bytes Foundation   **June 2022 – July 2022**
Building in VR Camp Instructor   *Stafford, VA*
- Created a 5-day schedule with 7 hours of teaching material each day to teach virtual reality development to a classroom of 20 students.
- Integrated advice from the Mozilla Hubs team and knowledge gained in lectures, research, seminars, and conferences to create highly educational, unique and comprehensive content.

Projects

Why Did the Chicken Cross the Road? - Virtual Reality Game | *Unity, C#*   **November 2021**
- Researched numerous PC, mobile, and VR games to design and build a VR game that is addictive and fun to play.
- Implemented procedural-level design and game development techniques like 3D noise, environmental triggers, and motion sensing to create a well-rounded, and functional game.

Test the Heights - Virtual Reality Game | *Unity, C#*   **November 2021**
- Utilized interactive systems to craft a thrilling and immersive experience.
- Performed user-testing to get feedback from 14 users in various stages of the game to make improvements continuously.