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**
- Used open-source Mozilla Hubs to build a server-client system and implemented custom scripts via JavaScript to record platform performance through a POST API.
- Used Python and Jupyter Notebook to compute, visualize and analyze systems data.
- Gave a virtual-reality lecture to 23 Graduate students and later assisted a well-established researcher in using my platform for a speech to 35 students.
- 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.

Projects

Why Did the Chicken Cross the Road? - Virtual Reality Game | *Unity, C#*   **November 2021**
- Researched and user-tested numerous PC, mobile, and VR games to design and build a virtual reality game that is addictive and fun to play.
- Implemented 3D noise, environmental triggers, motion sensing, and improved head-tracking to create a well-rounded, detailed, and positively functional game experience.

Test the Heights - Virtual Reality Game | *Unity, C#*   **November 2021**
- Created a fun and thrilling VR game with a procedural-level design.
- Utilized VR game development techniques like spatial audio and interactive systems to craft an immersive experience.
- Performed user-testing to get feedback from over a dozen users in various stages of the game to continuously make improvements.

Volunteering

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

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.
- Used my knowledge gained in university lectures, scholarly research, seminars, and academic conferences to create content that comes from the field of VR and is highly educational, comprehensive, and unique.
- Integrated advice from the Mozilla Hubs team to further improve the quality of teaching materials on Mozilla Hubs.

Technical Skills

Languages: Python, C#, C++, Java, C, HTML/CSS, JavaScript, SQL, R, SAS, MATLAB, Assembly
Developer Tools: Unity, Unreal, Spoke, VS Studio, Eclipse, Amazon Web Services
Softwares/Frameworks: Blender, Microsoft 365, Photoshop, Premiere, Plastic SCM, Linux, GitHub, JUnit, WordPress