Omar Khan

omar.khan2@ucalgary.ca | **Webpage** | **Google Scholar** | **GitHub**

About Me

I am an undergraduate student in Computer Science at the University of Calgary. Since January 2023, I am a research assistant with **Dr. Kangsoo Kim** at the **Human-X-Interaction Lab**. My research interests are Virtual Reality, Augmented Reality, Embodied Avatars and Agents, and Human-Computer Interaction. I expect to graduate in **Spring 2025**.

Education

09/2021 – 04/2025	**University of Calgary** Bachelor of Science (Honours) – Computer Science GPA: 3.82 / 4.00 Higher level courses in Computer Graphics and Human-Computer Interaction

Publications

1. **Omar Khan**, Anh Nguyen, Michael Francis, Kangsoo Kim. "Exploring the Impact of Virtual Human and Symbol-Based Guide Cues in Immersive VR on Real-World Navigation Experience". *2024 IEEE Conference on Virtual Reality and 3D User Interfaces Abstracts and Workshops (VRW)*, Orlando, FL, USA, 2024, pp. 883-884 **https://www.doi.org/10.1109/VRW62533.2024.00238**

Research Assistantships

09/2024 – 04/2025 *(scheduled)*	**Serious XR Lab and Human-X-Interaction Lab**, University of Calgary Supervisors: **Dr. Frank Maurer** and **Dr. Kangsoo Kim** Scheduled 8-month honours research project in XR.
04/2024 – 08/2024 *(ongoing)*	**Human-X-Interaction Lab**, University of Calgary Supervisor: **Dr. Kangsoo Kim** Investigating the impact of gorilla-like and human-like locomotion on user experience in virtual reality, and the relationship between avatar embodiment type (human vs animal avatars) and preferred locomotion method (Proteus Effect).
01/2023 – 08/2023	**Human-X-Interaction Lab**, University of Calgary Supervisor: **Dr. Kangsoo Kim** Exploring how various embodied guide cues in virtual reality can improve route-learning in the real world. Developed a virtual human guide and a symbol-based guide and integrated them into a 3D digital replica of a real-world building. Conducted a user study and published results as a poster at IEEE VR 2024.

Funding and Awards_____

2024   Alberta Innovates, Summer Research Studentship Award - **$7500**

2024   University of Calgary, Graeme Bell Travel Award - **$1350**

2023   Stanford XR, ImmerseTheBay Hackathon Winner - **$1000**

2023   IEEE Special Interest Group on Humanitarian Technologies, Project Voice Hackathon – 3rd place

2023   University of Calgary, Faculty of Science Dean's List

2023   Natural Sciences and Engineering Research Council of Canada (NSERC), Undergraduate Student Research Award - **$7500**

2023   Jason Lang Scholarship - **$1000**

2022   University of Calgary, Faculty of Science Dean's List

2022   Jason Lang Scholarship - **$1000**

2021   Alexander Rutherford Scholarship - **$2500**

Skills_____

Developing **VR** and **AR** experiences with **Unity3D**

Math (calculus, linear algebra, statistics)

User studies (human subject research)

Computer **Graphics** and Computer **Vision**

Conversational **Agents** and **Avatars**

Ethics

Programming (C#, C++, Python, JavaScript, Java)

Strong written and oral **communication**

Personal Projects / Hackathons_____

Visualizing Proteins in Mixed Reality (Unity3D, C#, AR glasses)

Calgary Drone Simulator (Unity3D, C#, Blender)

Gesture-Controlled Arcade Game (Python, Computer Vision)

AR Biology Lesson (Unity3D, C#, HoloLens)

Languages_____

English: Native speaker

French: Professional working proficiency

Hindi / Urdu: Limited working proficiency