

Omar Khan

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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, 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 **Serious XR Lab** and **Human-X-Interaction Lab**, University of Calgary
Supervisors: **Dr. Frank Maurer** and **Dr. Kangsoo Kim**
Ongoing 8-month honours research project in XR.

04/2024 – 08/2024 **Human-X-Interaction Lab**, University of Calgary
Supervisor: **Dr. Kangsoo Kim**
Investigating the impact of the congruence of avatar appearance (human vs gorilla) and locomotion (human-like vs gorilla-like) on user experience and avatar identification in VR. Developed a program, ran a user study, analyzed data and wrote a paper (publication pending).

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**

User studies (human subject research)

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

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

Math (calculus, linear algebra, statistics)

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

Ethics

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