Omar Khan

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EDUCATION

Honours BSc in Computer Science OGPA: 3.9 / 4

University of Calgary | Calgary, AB | Sep 2021 - Apr 2025

Awards: Faculty of Science Dean's List, NSERC USRA, Jason Lang Scholarship, Alexander Rutherford Scholarship

WORK EXPERIENCE

Undergraduate Research Assistant

Schulich School of Engineering | Calgary, AB | Jan 2023 - Present

- Research in digital twins, AR/VR and human-computer-interaction the HXI lab under supervision of Dr. Kangsoo Kim.
- Developed a web-app using ASP.NET, C# and JavaScript for the purpose of streamlining hazard inspections.
- Received the NSERC USRA award (\$7500) to fund the development of an AI virtual campus guide in the **Unity** game engine.

SKILLS

Languages C#, JavaScript, Python, C, Java, Kotlin, HTML, CSS, ARM64 Assembly, Bash, LaTeX **Frameworks** React, ASP.NET, PyTorch, Three.js, Tailwind, Jetpack Compose, PyGame, JavaFX, JUnit **Tools** GIT, Unity3D, Android Studio, Visual Studio, PyCharm, IntelliJ, VSCode, Eclipse, XCode

Fields Web Development, Android, iOS, AI (machine learning & computer vision)

PROJECTS

Calgary Drone Simulator o Game o Independent o <u>View on GitHub</u> o <u>Watch video</u> Oct 2022

- Developed a drone simulator set in a model of downtown Calgary that I built in Blender using real-world satellite data.
- Wrote C# scripts for handling drone physics and controls and other game interactions in the Unity game engine.

UofCoach ○ Web app ○ Collaborative (4) ○ View on GitHub ○ Watch video Calgary Hacks | Feb 2023

- Developed the frontend of a **React** app (**JavaScript**) which connects tutors with tutees on my university campus.
- Assisted in the development of the backend in Flask (Python), MySQL and SQLAlchemy.

POWER THRU • Web app • Collaborative (3) • View on GitHub • Watch video Hack the Change | Nov 2022

- Collaborated in a group of three to build a 3D React app that aims to support those struggling with addiction.
- Designed and developed the 2D part of the UI and the app logic using React (JavaScript), and Tailwind CSS.

Calgary Connect o Android app o Collaborative (9) o View on GitHub o Watch video YYC Hacks | July 2022

- Built a cross-platform application in a group of nine to inform tourists on events and attractions in downtown Calgary.
- Developed the Android component with Jetpack Compose (Kotlin), connected it to an events API and Google Maps.

Music Discovery App o Android app o Independent o View on GitHub o Watch video June 2022

- Developed 'Discover Electronic', an app to introduce users to electronic music and give them tailored recommendations.
- Designed a user interface and built it in Kotlin using the Jetpack Compose framework and the Android Studio IDE.

Prayer Time Retriever o Desktop app o Independent o View on GitHub o Watch video May 2022

- Built an Islamic prayer time retriever using **Python** to allow users to easily find prayer times for their location.
- Implemented a webscraping algorithm using the BeautifulSoup4 library to retrieve prayer times for any city in the world.

2-Player Snake Game o Web game o Independent o View on GitHub o Watch video Aug 2022

Re-created the snake game with a local multiplayer twist using JavaScript and CSS.