# ALI SHAHIDI

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## EDUCATION

**University of Calgary** *Expected December 2023*
Master of Software Engineering (GPA: 4/4.00) Calgary, AB

- Received full departmental graduate funding and international graduate tuition award.

**University of Tehran** *July 2020*
B.Sc. in Computer Engineering (GPA: 17.24/20.00) Tehran, Iran

- Received best undergraduate project, and two Faculty of Engineering Fellowship Awards.

## PROFESSIONAL EXPERIENCE

**Graduate Research & Teaching Assistant - Software Engineer** *January 2021 - December 2023*
University of Calgary – Key tech stack: Unity, MRTK, C#. Calgary, AB

- Led a project in the field of assistive XR technology. Managed a comprehensive study on assistive XR technology. Pioneered a collaborative effort involving professionals from diverse backgrounds, including psychologists, to conduct an in-depth study.
- Unity technical support for a 2-day Tech-Hackathon in collaboration with the Southern Alberta Section IEEE Special Interest Group on Humanitarian Technology (SIGHT).

**Graduate Teaching Assistant - Software Engineer** *January 2021 - December 2023*
University of Calgary – Tech stack: C, C++, Python, SQL, Spark, Machine Learning Calgary, AB

- Software Requirement Engineering, Object-Oriented Programming, Scalable Data Analytics, Software Engineering Practices for Data Management, and Programming Fundamentals.

## PROJECTS

**AI/ML/CNN Course Projects** | Python, PyTorch, TensorFlow, Pandas, Numpy 

- **Implementation** of seven projects on different artificial intelligence topics such as Search Algorithms, Genetic Algorithms, Classification, Multi-layer Neural Networks, and Regression. All these projects were implemented in Python and Jupyter Notebook.
- **Implementation** of five projects on different machine learning topics such as Image Classification with CNN and FCN, Auto-encoder model to denoise an image dataset, U-net model for signal denoising,
- **Classification** of Driving Behaviours Based on Deep Learning Algorithms like CNN and LSTM.

**HoloType** | Unity, C#, MRTK, Scrum, Git 

- Led, designed, developed, and maintained HoloType, a 3D interactive educational application with Augmented Reality, utilizing HoloLens 2.
- Added multiplayer option using Photon library to synchronize holograms, resulting in 25% improvement in overall user experience.
- Conducted three phases of user studies and refined the application based on feedback for subsequent phases to improve usability of the application.
- Developed a modular application. Implemented different features and customization options to enhance the user experience, leading to a 20% increase in user satisfaction and a 35% reduction in support requests from caregivers.
- Managed version control with Git, utilized Jira for progress tracking, documented using Confluence and LaTeX; integrated AWS text-to-speech API for closed captioning and voice customization, and facilitated lesson downloads through REST APIs.

**Complete C# Unity Game Developer 3D Course** | Unity, C#, Git

- Engineered realistic terrains, timeline animations, and applied post-processing effects in Unity; optimized path finding algorithms and grid systems to enhance gameplay experience and performance. Leveraged Unity's powerful features, including particle system and Cinemachine, to create visual effects and captivating game sequences.
- Independent game demos:
  - **Realm Rush**: In this strategy tower defense game, defend the realm by strategically placing defense towers and destroying the enemy's military forces.
  - **Space Attack**: Pilot the spaceship to eliminate the enemy forces.
  - **Rocket Boost and Obstacle games**: Rocket Boost and Obstacle games: Avoid different types of obstacles and reach the finish point.

## CERTIFICATIONS

**Complete C# Unity Game Developer 3D** | Udemy                                              *September 2023*

## SKILLS

**Languages**: C#, Unity, Unity3D, C, C++, Python, Java, HTML, JavaScript

**Databases**: MySQL, SQL

**Operating Systems**: Linux, Windows

**Tools**: Git, MRTK, Scrum, Jira, Confluence, Latex, Docker, Selenium

**Data Science & Machine Learning**: TensorFlow, PyTorch, Pandas, NumPy, Matplotlib, Apache Spark