

ALI SHAHIDI

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SUMMARY

Versatile developer with strong expertise in game development and data analysis. Skilled in Python, C, Unity, and SQL, with a proven ability to build robust data pipelines, perform statistical analysis, and develop immersive real-time applications. Experienced in analytical problem-solving, real-time data processing, automation, and cross-functional collaboration. Passionate about integrating data-driven insights into interactive experiences and continuously expanding technical skills through hands-on projects and learning.

PROFESSIONAL EXPERIENCE

Software Developer *September 2024 - May 2025*
ETHEREAL Research Group *Calgary, AB*

- Incorporated and implemented AI-driven real-time behavioral analysis, boosting video analysis speed by 90% and accuracy by 83% with local algorithms.
- Optimized performance by reducing third-party API costs by 98% through adaptive frame rate control and delta-based body language analysis.
- Engaged in self-driven learning to integrate advanced statistical methods in projects.

Software Developer - Protégé *September 2024 - March 2025*
ELIXR & Illumia *Calgary, AB, Remote*

- Contributed to 5 cross-functional projects, delivering a scalable solution for VR/AR experiences. focusing on areas such as data analytics, animation, lip-syncing, AI integration, performance tuning, real-time audio streaming, real-time Speech-to-Text processing, and interactive WebXR, Mobile, VR/AR, and PC experiences.
- Led and mentored a new intern by explaining code architecture, guiding implementation steps, and coordinating tasks through weekly sync meetings.

Software Developer - Internship *February 2024 - August 2024*
Telus *Calgary, AB*

- Collaborated with Telus Communications to develop a cross-platform AR application for iOS and Meta Quest 2.
- Engineered multiplayer functionality with NetCode and spatial anchor integration for AR app on iOS/Meta Quest 2.

Graduate Research & Teaching Assistant - Software Engineer *January 2021 - April 2024*
University of Calgary *Calgary, AB*

- Led a study on assistive XR technology in collaboration with psychologists and professionals.
- Provided Unity support during a 2-day IEEE Tech-Hackathon (SIGHT).
- Delivered courses on Software Engineering, OOP, Scalable Data Analysis, and Programming Fundamentals.

EDUCATION

University of Calgary *April 2024*
Master of Software Engineering (GPA: 4/4.00) *Calgary, AB*

- Received full departmental graduate funding and international graduate tuition award.
- Nominated for the Best Graduate Project at the Distinguished Master's Thesis Award in STEM Disciplines.

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

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

PROJECTS

ETHEREAL Research Group | Python, Data Analysis, C#, AI, Azure, API

- Built a cross-platform real-time video analysis app, enabling multimodal (text, video, voice, image) input processing.
- Designed a server-based AI pipeline to offload Client computation and support large-file chunking for efficient, reliable data transmission.
- Designed and deployed a custom data pipeline to preprocess pose landmarks and visibility scores across video frames, reducing model inference latency by 45%.

ELIXR & Illumia | Unity, C#, Data Analysis, Optimization, VR, Azure

- Designed and implemented analytics pipeline to capture user events, in-app behavior, and system metrics; analyzed data to guide UX and content updates.
- Built real-time audio system with always-on mic and event-driven responses in Unity.
- Built AI-driven animation system using third-party APIs to reflect user emotions.
- Enhanced Unity flight simulator with realistic procedures and optimized NetCode multiplayer.
- Improved performance via Profiler, GPU Instancing, Static Batching, Occlusion Culling, and Object Pooling.
- Real-time data streaming enabled with WebSocket integration in Unity.
- Refactored and scaled codebases focusing on data handling and system performance.

Telus | Unity, Unity 3D, NetCode, Azure

- Led the development of a multiplayer Augmented Reality application with Telus Communications, featuring NetCode, mapping, mesh rendering, animation, and interactions.
- This project will reduce transportation costs and enable remote instruction, enhancing efficiency and user privacy.

HoloType | Unity, C#, MRTK, Scrum

- Designed and led development of *HoloType*, a modular 3D AR educational app for HoloLens 2.
- Integrated photon-based multiplayer, improving the user experience by 25%.
- Conducted iterative user studies and analyzed session data to improve usability, resulting in a 35% reduction in caregiver support needs.
- Added customization features, increasing user satisfaction by 20%.
- Project secured additional funding and led to three published papers.

SKILLS

Languages: Python, C#, Unity, Unity 3D, C, C++, JavaScript

Frameworks: Express.js, React.js

Databases: SQL, PostgreSQL, MySQL

Data Tools: Excel, Pandas, NumPy, Matplotlib

Geospatial: Coordinate Systems, Spatial Anchors, Pose Landmark Tracking

Tools: Git, ClickUp, Docker, ARKit, ChatGPT, Cursor, Scrum, Jira, Confluence, LaTeX