

# Hamza Labib

[Portfolio](#) | [GitHub](#) | [LinkedIn](#)

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## Professional Summary

Dynamic Software Engineer with over 3 years of experience in game development, specializing in game engines, object-oriented programming, optimization, and debugging. Proven track record of quickly mastering new tools and programming languages to deliver high-quality software solutions. Adept at elevating game experiences through innovative strategies and performance enhancements.

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## Work Experience

### Gameplay Developer

*Altagram Inc Group - Canada*

*Feb 2024 – Present*

- **Led** the rapid prototyping of an innovative game concept, leveraging advanced Unity and C# skills to solve complex design challenges and validate gameplay ideas swiftly.
- **Boosted** performance by 30% through codebase optimization, identifying and refactoring bottlenecks.
- **Engineered** a dynamic content update system, using “System.IO” and Unity’s “TextAsset” resources to enable seamless data integration.
- **Authored** comprehensive documentation on prototyping techniques and optimization strategies, facilitating future development.

### Automation Engineer

*Altagram Inc Group - Canada*

*June 2023 – June 2024*

- **Performed** rigorous automated testing, identifying and resolving bugs to enhance game quality.
- **Collaborated** with the localization team to ensure accurate translations and cultural relevance for 5 global markets, integrating automation tools to streamline the process.
- **Streamlined** the QA process by efficiently documenting and tracking bugs using industry-standard tracking systems, implementing automation frameworks to improve testing efficiency and accuracy.

### Software Engineer

*Visualhawk Solution Inc - Canada*

*Nov 2022 – Nov 2023*

- **Developed** complex game systems and individual gameplay features using Unity, contributing to a 20% increase in user engagement.
- **Implemented** key game systems including Character, Camera, and Controls, ensuring a smooth player experience.
- **Optimized** VR platform performance by 25% through debugging, profiling, and performance tuning.
- **Designed** and deployed UI elements on schedule, collaborating closely with the team to meet project deadlines.
- **Enhanced** game data management through advanced serialization techniques with Wireshark.
- **Participated** in an agile development team, planning and executing tasks to meet project milestones.

## Mobile Application Developer

TEKE Inc - Canada

June 2022 – Nov 2022

- **Spearheaded** the development of the TEKE Bluetooth application within the Unity Editor, introducing color change functionality and playlist creation, enhancing user interaction by 40%.
  - **Developed** intuitive Canvas UI features, such as color selection and effect saving, significantly improving user experience.
  - **Implemented** Bluetooth and Wi-Fi toggling functionalities, showcasing a deep understanding of Unity networking processes.
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## Key Skills

- **Programming Languages:** C#, C++, Python, SQL, Java
  - **Game Engines:** Unity (Proficient), Unreal Engine 5 (Intermediate)
  - **Web Development:** HTML, CSS, JavaScript, REST APIs
  - **Software Architectures:** Top-Down, Event-Based
  - **Software Design Patterns:** Factory Pattern, Strategy Pattern
  - **Tools:** Git, GitHub, Jira, Wireshark
  - **Development Practices:** OOP, SOLID principles, Unit Testing, Integrated Testing
  - **Data Management:** Data Integration, Parsing, Serialization Techniques
  - **Machine Learning:** TensorFlow, AI and Machine Learning (Google Cloud Certified)
  - **UI/UX Design:** Game Engines, Front-End Tools, Tilemap, Unity Editor, Canvas
  - **AI Technologies:** NavMeshes, Pathfinding Algorithms, AI Systems.
  - **Networking:** Bluetooth, Wi-Fi, Photon
  - **Deployment:** WebGL, VertexAI, Spark Studio, Visual Studio, Perforce
  - **Soft Skills:** Problem-Solving, Team Collaboration, Communication, Self-Motivation, Flexibility to adapt to changes in plans, thrives in a flexible and creative work environment, Result oriented
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## Certifications

- **Machine Learning Engineer Professional Certificate, Google Cloud**
    - TensorFlow on Google Cloud
    - Launching into Machine Learning
    - Introduction to AI and Machine Learning
  - **Meta AR Developer Professional Certificate, Meta**
    - AR Foundation in Unity
    - AR in Marketing using Meta Spark
    - Foundations of AR
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## Education

### Attestation of College Studies: Video Games Programming

*Higher Institute of Computer Science, ISI*

Coursework: Game Engines, Object-Oriented Programming, Games Mathematics, Graphics Libraries, 2D/3D Tools, UI Programming, Web Programming, Artificial Intelligence

### Bachelor of Engineering: Electronic and Electrical Engineering

*Higher Technological Institute, HTI*

Coursework: Algorithms and Data Structure, Object-Oriented Programming, Operating Systems

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## Projects

### Siege Master

Unity3D, C#, VR, Third Person Shooter, Tower Defense

[GitHub](#) [Video](#)

- **Created** a 3D game with a team, using Unity and custom-made tools, resulting in a polished product within a 2-week timeline.
- **Integrated** dynamic UI, three enemy types, a unique boss with abilities, and a comprehensive quest management system.

### Tools

[Object Placer tool](#) [Mono Cards Creator tool](#)

- **Developed** front-end tools for card games, enabling rapid object placement and card creation with various designs.

### Get it & get out

Unity3D, C#, VR, Grappling hook

[GitHub](#) [Video](#)

- **Collaborated** with a team of 5 to create a 3D platformer game in Unity within a week.
- **Featured** melee combat mechanics, a grappling hook system, time manipulation mechanics, and one fully playable level.

### Physics Mario

Unity2D, C#

[GitHub](#) [Video](#)

- **Designed** and developed a 2D platformer game reminiscent of Mario using Unity.
- **Created** custom physics tools for game control, implemented parallax camera effects, and designed multiple levels.

### AI restaurant Manager

Unity 3D, C#

[GitHub](#) [Video](#)

- **Developed** an AI tool applicable to various games.
- **Designed** behavior trees for three different robots, managed command communication, and optimized agent navigation using NavMesh.

### Shoot It

Unreal Engine 5, Blueprint, First Person Shooter

[Video](#)

- **Designed** a first-person shooter game using Unreal Engine 5, completing all targets within strict time constraints