

# CLINT GALVEZ

Mississauga, ON

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## TECHNICAL SKILLS

**Languages** | C/C++/C# | GDScript | Python | Java | JavaScript | HTML | CSS | VB | Bash |

**Tools** | Unreal Engine (C++/Blueprints) | Unity | Godot | Git/SVN | Visual Studio | Linux | Jenkins |  
| Atlassian | Azure | Jira | Docker |

**Concepts** | Data Structures & Algorithms | OOP | Multi-threading | Machine Learning (RL/IL) |  
| Computer Vision | Pipelines | Agile | Networks |

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## WORK EXPERIENCE

- 05/2024 – Present**      **Unreal Engine Developer | Carleton Immersive Media Studio**      Ottawa, Canada
- | Developed an Unreal Engine plugin that enables real-time PostgreSQL database access during runtime, significantly extending engine capabilities for dynamic data-driven applications.
  - | Pioneered the implementation of Pixel Streaming on Linux, facilitating scalable, low-latency, browser-based access to containerized Unreal Engine instances.
  - | Automated the deployment and scaling of Unreal Engine applications using containers, which improved resource utilization and operational availability.
  - | Revamped and optimized core game mechanics alongside automated setup processes, achieving a 30% performance increase and enhancing user experience.
  - | Conducted user interface and user experience improvements based on testing feedback, incorporating new application mode functionalities.
  - | Independently researched and documented technical topics for studio use, enhancing internal knowledge resources.
  - | Actively engaged in Agile sprints and rapid iteration cycles to ensure timely project deliveries.
- 05/2023 – 12/2023**      **Software Automation Engineer | Lumentum Operations LLC**      Nepean, Canada
- | Automated file dependency management and built robust CI/CD pipelines, streamlining development and deployment workflows while eliminating manual file updates across multiple projects.
  - | Designed and developed virtual devices that remove hardware dependencies for seamless code and unit testing.
  - | Created error reporting and graphical user interface tools, significantly boosting productivity by 80% in manufacturing data workflows.
  - | Collaborated closely with cross-functional teams to troubleshoot software issues and deliver high-quality products.
  - | Implemented comprehensive performance testing procedures while maintaining detailed documentation for automated testing systems.
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## EDUCATION

**Honours Bachelor of Computer Science | Computer Game Development Stream**      Carleton University | Ottawa, ON

- | Graduated with High Distinction, achieving a 3.9 GPA
- | Co-operative Education

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## PROJECTS

### Dynamic Split-Screen Viewing System (Unreal Engine) [C++/Blueprints]

*Work In Progress*

- | Designed and implemented a multi-perspective camera system inspired by commercial split-screen frameworks, supporting up to 7 simultaneous player views.
- | Developed shader-based effects for seamless screen division and transition.
- | Built dynamic logic in C++ and Blueprints to switch between first-person, third-person, and RTS-style top-down perspectives, adapting automatically to the active split-screen configuration.
- | Engineered the system as part of a long-term personal game development project, with emphasis on scalability and flexibility for future gameplay mechanics.

### Honours Project – Human-Like Behaviour (Unreal Engine) [C++/Blueprints]

*Available on GitHub*

- | Developed a 3D stealth game environment in Unreal Engine 5, implementing advanced movement mechanics (walking, sprinting, jumping, crouching, traversal) and dynamic level design to support AI training and evaluation.
- | Designed and trained AI agents using Unreal Engine's Learning Agents plugin, leveraging both reinforcement and imitation learning to create non-player characters that mimic human-like stealth and pursuit behaviours.
- | Implemented a robust observation and reward system for AI agents, balancing objectives such as target pursuit, stealth, and environmental awareness to foster realistic, unpredictable in-game behaviour.
- | Integrated motion matching technology to achieve fluid, lifelike character animations, enhancing both visual realism and the believability of AI-controlled agents.
- | Engineered a hybrid AI architecture combining neural networks with behaviour trees, enabling adaptive, context-aware decision-making and seamless switching between machine-learned and rule-based behaviours.
- | Conducted iterative testing and optimization of AI training parameters, including reward shaping, episode management, and environment complexity, to improve agent performance and generalization.
- | Collaborated with playtesters to collect human gameplay data for imitation learning, refining AI behaviour to closely match real player strategies and movement patterns.
- | Documented technical findings and contributed insights on scalable approaches for developing immersive, human-like AI in modern games.

### Cranial Electrotherapy Stimulation (CES) Device Simulation (Qt Creator) [C++]

*Available on GitHub*

- | Implemented core C++ features for a device simulation in a team of four, ensuring all deliverables met requirements and deadlines through effective collaboration and testing.
- | Developed documentation, UML diagrams, and test scripts, which improved project maintainability and earned positive feedback from instructors.

### Simulated Elevator System (Qt Creator) [C++]

*Available on GitHub*

- | Designed and implemented an object-oriented elevator control system to efficiently manage multiple elevator requests and state transitions.
- | Applied the Strategy pattern and real-time status updates to optimize elevator assignment, improving responsiveness and scalability.

### Dark Souls Clone (Unity) [C#]

*Available on GitHub*

- | Built modular systems for movement, combat, and weapon management.
- | Implemented controller and keyboard input mappings for various systems.