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SUMMARY

4th-year Computer Science student specializing in Software Practices at the University of Alberta. Proficient in C++, C#, and Python with a strong foundation in low-level systems, automated testing, and Agile development. Passionate about bridging technical logic with creative execution to build high-fidelity, production-grade gameplay systems and real-time animation pipelines.

TECHNICAL SKILLS

- Languages: C++, C#, Python, Java, C, SQL, JavaScript.
- Engines & Tools: Unreal Engine (Animation Blueprints), Unity, Maya (Foundational), Git, Docker, AWS.
- Core Engineering: Memory Management, Polymorphism, Data Structures, RESTful APIs, CI/CD.
- Testing: NUnit, JUnit, Postman, Playwright, Selenium.

PROJECTS

Procedural Locomotion & Animation Framework | C++, Unreal Engine, Maya

- Technical Integration: Engineered a procedural locomotion system using C++ to calculate real-time lean angles and velocity-based transitions for character movement.
- Animation Logic: Designed and implemented complex Animation State Machines and blend spaces to handle seamless transitions between locomotion, traversal, and combat stances.
- Data Integrity: Developed consistency checks and automated unit tests to ensure skeletal mesh integrity and correct root motion behavior during high-intensity gameplay sequences.
- MoCap Retargeting: Practiced retargeting Motion Capture data to custom character rigs, focusing on maintaining realistic weight distribution and timing fundamentals.

File System Simulator | C, Low-Level Systems Programming

- Designed a simulated file system supporting custom system calls for file and directory creation, deletion, and resizing.
- Implemented consistency checks ensuring i-node validity and correct block allocation, demonstrating the meticulous attention to detail required for engine-level stability.

PROFESSIONAL EXPERIENCE

Developer Intern | Nestuity | Sept 2025 – Present

- Systems Debugging: Performed deep code reviews and debugging to prevent vulnerabilities in API usage and input validation, ensuring system stability for a 2025 launch.
- Process Automation: Utilized C# and ASP.NET Core to automate administrative workflows and improve feature reliability in a collaborative Agile environment.
- Scalable Infrastructure: Deployed microservices via Docker on AWS, implementing CI/CD principles for continuous delivery.

Undergraduate Teaching Assistant | University of Alberta | Sept 2024 – Present

- Technical Mentorship: Guided 100+ students through labs on data structures and algorithms, providing hands-on debugging support for backend and web code.
- Provided rapid-response troubleshooting for student software environments, maintaining stable lab operations and high student satisfaction
- Supported students in debugging web and backend code, reinforcing core software development and testing principles

EDUCATION & LEADERSHIP

- University of Alberta: Bachelor’s in Computer Science (Specialization in Software Practices).
- Awards: 3X Vice President Student Council; 2X Winner of Best Leader for Rejuvenation Camp.
- Scholarships: Net over $7,500 in Regional Excellence and International Admission awards