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| EDUCATION |
| Aug 2021 — Present | Bachelor of Arts, Cornell University |  |
| * **Major:**Computer Science
* **Minor:**Game Design
* **Clubs:**Development in Games Association, Cornell University Mixed Reality
* **Relevant Coursework:**Introduction to Computer Graphics,Introduction to Game Development, Foundations of Artificial Intelligence, Computer Systems Organization, Algorithms & Data Structures, Functional Programming, Discrete Mathematics, Object-Oriented Programming, Linear Algebra, Multivariable Calculus
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| PERSONAL PROJECTS |
| Oct 2024 — Oct 2024 | PolyGone | Ludum Dare 56 |
| * Developed a 3D action-stealth game in Unity within 72 hours, collaborated with a team of six to address the theme "Tiny Creatures".
* Implemented a comprehensive Finite State Machine (FSM) to ensure seamless action and animation transitions for player and enemy characters.
* Engineered a robust combat and stealth system, encouraging diverse player strategies and enhancing gameplay depth.
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| Sep 2024 — Dec 2024 | The Interrogation | Coursework Film Project |
| * Directed a short student film focused on themes of trust, relationships, and progressive mental breakdown, overseeing all stages from concept development through final editing
* Collaborated with a team to design and execute scenes inspired by "The Dark Knight", Inglourious Basterds", and "The Silence of the Lambs", focusing on psychological tension through lighting, framing, and sound design
* Led on-set coordination with actors and crew, completing all footage in 20 hours over 2 days, followed by 3 weeks of editing to deliver rough, fine, and final cuts for a Kiplinger Theater premiere
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| Aug 2024 — Dec 2024 | Flight Sim | Coursework Graphics Project |
| * Developed 3D world terrains, clouds, and vegetation, creating an expansive plane for players to explore, enhancing the immersive experience.
* Implemented procedural terrain generation using Perlin Noise functions to create customizable meshes, allowing flexible parameter adjustments to modify terrain appearance and complexity.
* Programmed procedural vegetation and terrain features, dynamically spawning trees, foliage, and other elements to boost realism and immersion in the game environment**.**
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| Aug 2024 — Aug 2024 | ALICE alice | GMTK 2024 |
| * Developed a 2D platformer in Unity within 96 hours for the GMTK 2024 Game Jam, collaborating with a team of seven to address the theme "Built to Scale".
* Designed intricate levels and core gameplay mechanics centered on the concept of scaling, creating an immersive world inspired by*Alice in Wonderland*, while integrating narrative elements aligned with the theme.
* Implemented key systems, including player and NPC movement, a universal scaling system, audio, and UI interactions, ensuring seamless integration across all components for a cohesive user experience.
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| Jul 2024 — Jul 2024 | Second Species | CiGA 2024 |
| * Developed a 2.5D puzzle-solving platformer in Unity within 48 hours, winning 1st place in a game jam with a team of six, centered on the theme "Limited and Limitless".
* Implemented various classes of interactive objects, enabling dynamic player interaction with the environment to solve complex puzzles.
* Designed and built levels using custom assets created by the art team, ensuring seamless integration of gameplay mechanics and visuals.
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| Apr 2024 — Present | Hiraishin | Independent Game Project |
| * Initiated the development of a 3D first-person action game in Unity, featuring advanced space-time manipulation mechanics like teleportation and bullet time to enhance player abilities.
* Designed complex, scalable levels with progressive difficulty, integrating adaptive enemy AI that dynamically responds to player actions, encouraging diverse strategies for environment traversal.
* Engineered the gameplay system using techniques such as Procedural Animation, State Machines, and AI Pathfinding. Applied object-oriented programming principles in C# to manage game logic, and interaction systems, and optimize performance for smooth gameplay across different hardware configurations.
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| Apr 2024 — Apr 2024 | Back to Life | Ludum Dare 55 |
| * Collaborated with a team of three to develop a 3D puzzle exploration game in Unity within 72 hours for Ludum Dare 55 Game Jam, themed "Summoning".
* Engineered complex puzzle mechanics, inspired by*Return of the Obra Dinn*, involving dynamic object interactions and dialogue reconstruction to solve mysteries.
* Designed an advanced unlockable system using randomized algorithms and object state management, ensuring smooth progression and preventing gameplay soft locks.
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| Jan 2024 — May 2024 | Everlast | Coursework Game Project |
| * Led a team of four programmers within a group of seven to develop a 2D speed-running game using the LibGDX framework.
* Designed the software architecture following Object-Oriented Programming (OOP) principles for scalable and maintainable code.
* Developed core features, including an advanced AI system, customizable audio, a responsive player controller, and a dynamic level generation system using Tiled.
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| Jan 2024 — Jan 2024 | Kuso Neko | Global Game Jam 2024 |
| * Developed a 2D side-scrolling infinite runner game using Unity within 72 hours, collaborating closely with a small team of three to execute core gameplay mechanics under tight constraints.
* Engineered a procedural generation system for dynamic obstacles and collectible food items, ensuring replayability and a unique player experience in every run.
* Conceptualized and implemented a Hunger management system, where players must balance resource consumption to maintain optimal performance, introducing strategic decision-making by requiring players to stay agile while avoiding exhaustion and enemy threats.
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| Sep 2023 — Oct 2023 | Glutton-Free | Ludum Dare 54 |
| * Secured a top 20 popularity ranking, developing a widely acclaimed game within 72 hours with a team of three, centered around the theme "Limited Space".
* Engineered the soft body physics system utilizing 2D bone rigging, significantly enhancing the gameplay dynamics and player immersion.
* Designed the tutorialization of game mechanics, obstacles, and objectives in a clear, engaging, and accessible manner, enhancing player onboarding and overall enjoyment.
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| Oct 2022 — Dec 2022 | Lumiere | Independent iOS App Project |
| * Developed an iOS tracker app for logging, commenting, and organizing watched movies and future watchlists.
* Achieved rapid user adoption, processing over 1,000 database read/write requests within the first two days of launching on the App Store.
* Implemented a robust email authentication system using FirebaseAuth and securely managed data storage with Firestore, ensuring scalability and user data protection.
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| EMPLOYMENT HISTORY |
| Jan 2024 — Present | Undergraduate Teaching Assistant, Cornell University |  |
| * Provided academic support during office hours (1-2 hrs/week), offering expert guidance on complex course material and assignments to enhance student understanding.
* Collaborated with faculty and peers in weekly grading sessions (3-5 hrs/week) to ensure fair and accurate evaluation of student work.
* Mentored students on final projects, offering feedback and assessing deliverables (1-2 hrs/week in the second half of the semester) to promote high standards of technical and conceptual achievement.
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| Mar 2023 — Jan 2024 | Co-Founder, TechCafe |  |
| * Led a collaborative project to develop an NFC-based web service that enabled seamless menu interaction for customers across Japan.
* Designed and implemented the user interface using ReactJS and Bootstrap, ensuring an intuitive, responsive, and mobile-friendly experience.
* Integrated the Stripe API for secure, streamlined payments, established connectivity with NFC tags, and utilized Firebase for efficient data storage, along with Socket.io for real-time communication.
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| SKILLS |
|  | **Languages:**C#, C++, JavaScript, Python, Java, Swift, C, OCaml, HTML, CSS**Engines & Frameworks**: Unity, Unreal Engine, LibGDX**Databases:**Firebase, MongoDB, MySQL, SQLite**Development Tools:**Git, Bash, Unix/Linux |