Jack Drabenstadt

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Game developer and designer graduating Spring 2026 with dual B.S. degrees in Computer Science and Digital Narrative & Interactive Design. Experienced in building games in Godot and Unity, from systems programming to narrative design and playtesting. Background in distributed systems research and server infrastructure.

Education

University of Pittsburgh — Pittsburgh, PA
B.S. Computer Science; B.S. Digital Narrative & Interactive Design — Expected Spring 2026
Minor in Information Science — GPA: 3.386

Experience

- **University of Pittsburgh — Independent Study in Game Development** — Pittsburgh, PA
  Solo Game Designer & Programmer — *Fall 2024 – Present*
  - **Game Design — Lamport General Systems**: First-person immersive sim set inside a derelict data center running Byzantine fault-tolerant protocols, where players intercept messages, inject code, and sabotage subnetworks to influence an authoritarian surveillance state. Produced concept doc, pitch deck, systems design, and a playable in-engine prototype.
  - **Implementation**: Currently building the full game in Godot (GDScript). Engineered a simulated terminal with functional command parsing, custom state machine player controller, network simulation layer, and item interaction systems. Managing development with Kanban and iterative sprints. Conducting ongoing playtesting to assess whether terminal mechanics and game systems are intuitive without explanation.
- **University of Pittsburgh** — Pittsburgh, PA
  Undergraduate Research Assistant — Distributed Systems — *December 2024 – August 2025*
  - **Dynamic Reconfiguration System**: Designed and implemented a YAML-based runtime configuration system in C for Spire, a Byzantine fault-tolerant distributed system. Replaced static compiled constants with live reconfiguration: developed YAML parsing, network transmission, and application components enabling configuration updates without recompilation.

Projects

Fight or Flight — **Pitt Games 4 Social Impact (G4SI) Game Jam (2025)**: Won Technical Achievement Award. 2.5D platformer built in Godot in 48 hours; player controls a flightless penguin navigating climate displacement through movement constraints. Built NPC dialogue system with per-character text speed and sound pitch variation to convey personality without voice acting. Managed all Git operations for a four-person team including merge conflict resolution under deadline pressure.

Public Service Abandoned — Pitt G4SI Game Jam (2024): Won First Penguin Award. Ren'Py visual novel exploring the value of public service and its impact on communities.

Caterpillar Quest: Top-down exploration game in Unity (C#) inspired by *The Very Hungry Caterpillar*. Exceeded class requirements by implementing full 3D environments where a 2D game was the minimum. Built custom Arduino glove controller: accelerometer maps hand tilt to cursor position using absolute positioning, with finger contacts emulating mouse clicks. Resolved core hardware problem by pivoting from velocity to tilt-angle mapping, producing immediately intuitive control. Python pipeline handles auto-calibration, deadzone filtering, and cursor scaling. Validated through five-user playtest with iterated design changes.

Discards: First-person narrative game in Godot exploring identity and digital consciousness. Structured around a single irreversible moral choice that permanently alters the game state, implemented via conditional state tracking that controls which world elements are visible and interactable.

Home Server Infrastructure: Maintain a 50TB RAID server running Docker-containerized services with reverse proxies, DNS, firewall, and automated backups. Reduced power consumption 50% through hardware optimization.

Technical Skills

- **Languages**: C# | C | C++ | GDScript | Python | Java | JavaScript | HTML/CSS
- **Engines & Tools**: Godot | Unity | Blender | Git | Photoshop | Premiere | Docker | Linux | Arduino