Joshua Krauchi

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SKILLS

Tools: Unreal Engine 4 / 5, Unity, Godot, Perforce, Git, Slate UI, Wwise, React, Node.js, MongoDB, DirectX 12
Languages: C++, C, C#, Python, Java, HTML / CSS, JavaScript, Ruby, AutoIt

EXPERIENCE

HELLBENT GAMES   June 2022-June 2023
Gameplay / Tools Developer (Unreal Engine) steampowered.com/app/611360

- Used Behavior Trees and EQS to implement AI systems for four different enemies.
  - Allowed for the inclusion of bot matches against enemy AI.
  - Used Behavior Trees to determine how to react to different sounds, weapons, and engage a player.
  - Created EQS tests to retrieve the best target character and best cover position from danger.
  - Implemented a noise event system integrated with Wwise for the AI system to perceive sound.
- Eliminated shader compilation stutters by creating a Pipeline State Object generation tool.
  - Saved ~2 hours of manual work every time a new update was released.
  - Upon launch, the tool surveys every piece of content, including maps and cosmetics, in order to build a PSO cache to be included with each update of the game.
- Developed a software packaging tool using C++ and Slate UI.
  - Included options for building for specific platforms and logging in to an online storefront with credentials.
  - Provided a simple interface for non-coders to build the editor and run the game.
  - Allowed for easy testing when fixing bugs that only appear under specific circumstances.
- Refactored the weapons system to have a more uniform object-oriented design.
  - Extracted similar functionality into a separate interface for chargeable weapons.
  - Simplified logic in the codebase that relied on weapons of certain subtypes.

PROJECTS

CHROMODE!! - Bigmode Game Jam 2023   December 2023
Developer (Unreal Engine) joshuakrauchi.itch.io/chromode

- Added full color blind support by tying every color in the game to a parameter collection.
- Implemented AI, red/blue weapons, dynamic reticles, combo/damage numbers, chaos destruction, and pickups.

SPOOKY HORROR GAME - Self-developed Steam release   January 2022
Developer (Unreal Engine) steampowered.com/app/1764910

- Integrated AI to power features such as enemy audio/visual perception, patrolling, and decisions.
- Designed and implemented an inventory system, gun mechanics, and randomized spawning logic.

EDUCATION

BRITISH COLUMBIA INSTITUTE OF TECHNOLOGY   Graduated 2022
Computer Systems Diploma   *3.7 GPA*

- Helped organize two coding events as VP of Events for Coding for All, an educational club.

Hobbies: Gaming, piano, running, anime, music, writing.
Other: Published a children's book. 100% completed 30 games including Skyrim.