Blake Shea

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SKILLS

Languages: C#, Python, Java, SQL, HTML
Skills: Unity, DBMS (PostgreSQL, MongoDB, SQLite, MySQL), PlasticSCM, GitHub, Git, Unix, Docker, Django

PROJECTS

AI Character Server (Education App) | Python, MongoDB, FastAPI, GPT, LlamaIndex   August 2024 - Current
- Developed an anthropomorphic AI using GPT4o and a MongoDB Vector RAG system to support an AR mobile game built in Unreal Engine 5.4
- Built an HTTP request system to serve AI chat and emotion outputs to the client application
- Created a server-side application using FastAPI to add knowledge base documents and edit character prompts dynamically for real-time testing

FPS Horror Game "Condemned" | Unreal Engine, Blueprints, Git   October 2024 - October 2024
- Developed a 3D environmental horror game in Unreal Engine 5 for IGDA Clark's Halloween Game Jam 2024
- Used UE's blueprint system to procedurally animate player's body and camera to create realistic breathing and walking effects

Django WebApp "D&D Inventory" | Python, Django, Docker, Git, PostgreSQL   January 2024 - May 2024
- Developed a full-stack inventory web app for D&D player characters using Python, Django, and PostgreSQL
- Utilized industry deployment practices with docker and git to maintain the app's dependencies in a containerized environment

2D Split-Screen Fighting Game "Bellicose" | C#, Unity, Git   February 2024 - February 2024
- Worked with a team of 5 to submit a 2D player versus player fighting game in 48 hours
- Designed a complex FSM and ability lookup system to allow for easily adding new characters with new abilities
- Implemented character combat & animations including high and low blocks, attacks, specials, IFrames, and hit animations

Isometric Narrative Game "Starbound Wanderers" | Unity, C#, Plastic SCM   January 2024 - June 2024
- Developed enemy AI agent state machine and custom A* based queue path request service
- Managed source control and branching with PlasticSCM across a 15-person team
- Implemented tree-node PixelCrushers narrative design system to enable conversation and narrative events

Game Overlay "TFT Winstreak" | HTML, CSS, JS, Overwolf   January 2024 - June 2024
- Created a Riot Games API integrated overlay application within the Overwolf Web Development Environment
- Designed a player look-up and match history system using Riot Games API and HTTP requests with Node.js

Discord ASCII Top-Down RPG "NeonNet" | Python, Discord API, MySQL   September 2023 - January 2024
- Created a top-down turn-based role-playing game playable within public Discord channels using the Discord API
- Configured safe CRUD operations using a MySQL database to store user profile, inventory, and map data
- Translated map data into ASCII output strings to represent player locations, walls, end flags, and enemies
- Created enemy AI agents using A* to chase and initiate simulated text-based combat with the player

EXPERIENCE

- Extended Reality Lab Intern at Clark University | *HTML, CSS, JS*   January 2024 - Current
- TA for CS120 Introduction to Computing | *Python*   August 2024 - Current
- Python and UnityVR at ID Tech | *Unity, C#, Python*   May 2024 - November 2024

EDUCATION

Clark University: Computer Science, Interactive Media: Game Development   2022 - Current
Relevant Coursework: Data Structures, Algorithms, Automata Theory, Database Management & Systems Design, Artificial Intelligence for Games, Analysis of Programming Languages, Web Development, Discrete Structures