Blake Shea

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EDUCATION

Clark University   August 2022 – Present
Bachelor of Arts in Computer Science, Interactive Media   *Worcester, MA*

EXPERIENCE

Software Engineering Intern   August 2024 – Present
Avilaar, Inc   *Worcester, MA*
- Built a scalable narrative interaction system using Python, MongoDB vector search, and GPT-4o, supporting 25+ users and improving response times by 300%
- Designed and containerized the system as a FastAPI app with Docker, deploying on AWS EC2 with automated scaling, ensuring high availability and efficient resource utilization

Extended Reality Lab Intern   January 2024 – Present
Clark University   *Worcester, MA*
- Developed a full-stack web application for managing XR device sign-outs using Django, PostgreSQL, and JavaScript, improving equipment tracking efficiency by 60%
- Led technical support for 5 student and professor-led Unity VR projects, optimizing build processes and enhancing in-game performance

Undergraduate Teaching Assistant   August 2024 – December 2024
Clark University   *Worcester, MA*
- Facilitated instruction of Python and computer science principles to over 40 students
- Conducted regular office hours, mentoring students to achieve a **40% increase to assignment grades** for regular attendees

C# and Python Instructor   May 2024 – November 2024
ID Tech   *Cambridge, MA*
- Delivered immersive lessons in **Unity and C#** to over 100 K-12 students at MIT, fostering a collaborative learning environment that resulted in a 90% **student satisfaction rate** based on course evaluations
- Orchestrated team-based projects, driving completion of over **30 collaborative virtual reality games**
- Transitioned in-person lessons to an online format, tutoring 10 regular clients in **Unity3D, C#, and Python**

PROJECTS

Dungeons & Dragons Inventory Webapp | Python, Django, Docker, PostgreSQL   January 2024 – Present
- Developed a **Django-based web application** to manage and track character inventories for Dungeon & Dragons campaigns, providing structured item management and real-time updates for 30 users
- Integrated a **PostgreSQL database** to store and retrieve player inventory data, supporting seamless CRUD operations for over 100 unique items
- Containerized the application using **Docker**, streamlining deployment and ensuring a consistent development environment across 4 machines with different operating systems

Discord ASCII Top-Down RPG | Python, Discord API, MySQL   September 2023 – January 2024
- Created an innovative turn-based RPG accessible to Discord users using Discord's Bot API outputting ASCII strings to represent players, enemies, and walls within a 10x10 grid
- Engineered and implemented CRUD operations to a MySQL database to store user, inventory, and map data of 43 active players

Gold Tracker Overwolf App | Python, Discord API, MySQL   September 2023 – December 2023
- Engineered a predictive Overwolf application leveraging Riot Games API, forecasting in-game gold earnings with 95% accuracy and displaying historical match data for enhanced player strategy analysis
- Drafted intuitive user interface utilizing JavaScript and Overwolf SDK, resulting in in-game overlays with 70% user satisfaction based on feedback sessions

TECHNICAL SKILLS

Languages: Python, C#, Java, SQL (Postgres, MySQL), HTML/CSS
Frameworks: Unity, FastAPI, Django
Tools: Git, Github, Docker, MongoDB, PlasticSCM, VS Code, Visual Studio