Aaron Post

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Education

The Ohio State University — Columbus, OH
Bachelor of Science in Computer Science (cumulative GPA 3.45) — *Aug. 2020 - May 2024*

Experience

Software Design & Development Research Assistant — Mar. 2023 – Present
The Ohio State University — *Columbus, OH*

- Designed and developed 3 academic video games and simulations in a team setting.
- Discussed design details and planned future projects in regular meetings twice a week.
- Collaborated with Metro Early College High School to solve complex Math and Physics problems.
- Worked with Unity, C#, and .NET; used Git/GitHub Projects for source code and project planning.

Project Design & Development Teaching Assistant — Aug. 2023 – Present
The Ohio State University — *Columbus, OH*

- Held office hours twice a week; guided students to make smart design decisions for 6 large Agile sprints (labs).
- Met monthly with multiple groups of 6 students at a time; reviewed students' code based on high-quality programming practices including readability, high cohesion, and low coupling.
- Graded student labs and provided constructive feedback covering all phases of the design cycle.

Projects

Dentist Office Relational Database | *SQLite, Relational Database Design* — May 2022 – July 2022

- Created a database for a fictional dentist office for a school project on a team of four.
- Followed the complete design process: created an (E)ERD, relational schema, and SQL database.

ClashCraft Plugin | *Java, Spigot API, Maven, Git, XML, JSON* — June 2022 – July 2023

- Developed a large Minecraft plugin in Java for a multiplayer server during free time.
- Created a system for managing persistent data efficiently using Google's GSON API.
- Applied knowledge of graph theory algorithms for pathfinding systems.
- Used Maven to automate build processes and install libraries.

Networking File Transfer Programs | *Python, Unix, File I/O, Troll* — May 2023 – Aug. 2023

- Created 4 file transfer programs in Python that transmit packets over the internet using UDP or TCP.
- Each program reads a file, separates the data, and transmits packets between a client and server.
- Implemented an alternating-bit protocol, and used troll to forcibly drop packets and test the functionality.

Stern Gerlach Simulation and Einstein's Quest | *C#, .NET, XML, Unity, Git* — Mar. 2023 – Oct. 2023

- Designed and developed 2 prototype simulations that teach quantum physics.
- Implemented a data-driven system that walks the user through experiments step by step.
- User knowledge is checked along the way with multiple-choice and open-ended questions.

Lost in the Static | *C#, C++, Arduino, .NET, Unity, Git* — Jan. 2024 – Feb. 2024

- Led design and development of a narrative puzzle game that uses a custom physical radio controller.
- Followed circuit diagrams and wired many sensors to the arduino: potentiometers, buttons, LCD screen.
- Created a radio controller and implemented bidirectional serial communication between Unity and an Arduino.
- Worked alongside a diverse team of 6 from various backgrounds: software engineers, artists, narrative writers.

Technical Skills

Languages: Java, C#, Python, C, C++, SQL, HTML/CSS, x86 Assembly, Scheme48 (Functional), JSON, XML
Frameworks/Libraries: .NET, JUnit, Unity, Google API, SpigotAPI, Monogame
Developer Tools: GitHub, Azure DevOps, Linux/Unix, Maven, Visual Studio, VSCode, IntelliJ, Eclipse, Unity
Expertise with object-oriented design: Knowledge of common design patterns, SOLID principles
Knowledge of Microsoft Software Suite: Word, Excel, Powerpoint, Teams, Outlook, OneDrive, Visio, etc.