

Emi Brown

 github.com/EmiCB

Amazon | Software Development Engineer

July 2024 – Present

Emerging Marketplaces Trust and Confidence (Amazon.com)

Seattle, WA

- Expanded "trust widget" UI (secure payment, fulfillment, etc.) on Cart page to emerging marketplaces
- Migrated complex workflows for internal recommendation service using Typescript, AWS CDK
- Updated accessibility (TTS and keyboard navigation) of trust widget on product detail page using JSP
- Developed custom "X+ people bought" thresholds for emerging marketplaces
- Scaled up shopping aids backend services for high velocity event, AWS
- Manage incidents as part of team oncall

Amazon | Software Development Internship

May 2023 – August 2023

Objective-C code generation tool from TypeScript for mobile shopping app developers

Seattle, WA

- Utilized AST structure, TypeScript, ts-json-schema-generator, Mustache, Jsonata, Objective-C
- Authored technical design document with implementation plan
- Participated in regular team updates, code review, design review

University of Illinois WHIMC + INVITE | Software Engineer

January 2021 – May 2024

NSF funded project using Minecraft to explore hypothetical astronomy and engage kids in STEM

Champaign-Urbana, IL

- Developing and maintaining Minecraft plugins using Java, Bukkit API, IntelliJ, and Eclipse
- **ContainerTracker Minecraft Plugin** - collects data on items and their positions inside of storage containers for INVITE camps
 - * Integrated with MySQL to more easily add to preexisting WHIMC databases
- **LockBar Minecraft Plugin** - locks specific slots of a player's inventory during official WHIMC summer camps
 - * Compiled extensive documentation for open source release
 - * Published to Spigot plugin hosting site for public download
- Creating educational content using WorldEdit, Quests, Citizens, and in-house plugins
- Collaborating with research and technical teams to integrate education research, AI, and Minecraft

MaterialsVR App | Unity Mobile Developer

January 2018 – January 2021

Virtual reality app for iOS and Android to help students visualize molecular structures

Champaign-Urbana, IL

- Presented poster at both NCSA SPIN Research Symposium and Engineering Open House in 2019
- Created a virtual reality app using Google Cardboard to help students visualize molecular structures using Unity, C#, Xcode
- Published and currently maintaining [App Store](#) and [Google Play Store](#) pages
- Implemented hands-free gaze input system for user accessibility

Projects

Blood Barter | Godot, GDScript

Text-based adventure game exploring the concept of sacrifice, where players navigate and trade in a mysterious night market

- Submitted solo for Discord Jam 8, a 48-hour game jam with the theme "decay"
- Designed and developed a complete game with text command mechanics

MMO Healer Simulator | Unity, C#, Git, Aseprite, BeepBox

Use classic MMO tab-targeting and abilities to keep your party members alive through an infinite dungeon

- Submitted solo for Ludum Dare 46, a 72-hour game jam with the theme "keep it alive"
- Designed and developed a complete game with resource management and active ability mechanics
- Created art and music assets

Papers

MineObserver 2.0: A Deep Learning & In-Game Framework for Assessing Natural Language Descriptions of Minecraft Imagery

Dec 2023

Education

University of Illinois Urbana-Champaign

May 2024

Bachelor of Science in Computer Science

Technical GPA: 3.82/4.0

Chancellor's Scholar, Dean's List

Relevant Coursework: Game Development, Game Development Process, Computer Graphics, Data Structures and Algorithms, Software Design Studio, Computational Photography, User Interface Design, Numerical Methods, Computer Architecture, Probability and Statistics, Data Visualization, Algorithms and Models of Computation, Ethical and Professional Issues, Programming Languages and Compilers

Technical Skills

Languages: Java, C++, C#, GDScript, Python, Markdown, HTML/CSS, JavaScript, Typescript, Liquid, MySQL, MIPS Assembly, Verilog

Frameworks: Unity Engine, Unreal Engine, Godot, Android Studio, Xcode

Spoken Languages: German (conversational)