

# Emi Brown

 [github.com/EmiCB](https://github.com/EmiCB)

## Amazon | Software Development Engineer

July 2024 - Present

Seattle, WA

*Emerging Marketplaces Trust and Confidence (Amazon.com)*

- 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

Seattle, WA

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

- 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

Champaign-Urbana, IL

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

- 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

Champaign-Urbana, IL

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

- 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)