# Emi Brown

## Education

**University of Illinois Urbana-Champaign**                                          **Expected May 2024**
*Bachelor of Science in Computer Science*                                     *Technical GPA: 3.82/4.0*
Chancellor's Scholar, Dean's List

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

## Experience

**Amazon | Software Development Intern**                                          **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 – Present**
*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
- 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 | Mobile Developer and Maintainer**                           **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

**ContainerTracker Minecraft Plugin** | *Java, Bukkit API, Maven, IntelliJ, MySQL, Git*          **August 2023 - Present**
- Designed and developed a plugin to collect 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** | *Java, Bukkit API, Maven, IntelliJ, Git*                          **June 2022 - Present**
- Designed and developed a plugin to lock 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

**Glitch Game** | *Unreal Engine 4, Blueprint, Git*                                               **April 2022**
- Collaborated with small team to design and develop a complete game
- Managed project board with deadlines and weekly development goals to evenly split work and deliver on time
- Organized team meetings with mentor to implement feedback every week

## Technical Skills

**Languages**: Java, C++, C#, Python, Markdown, HTML/CSS, JavaScript, Liquid, MySQL, MIPS Assembly, Verilog
**Developer Tools**: VS Code, Unity Engine, IntelliJ, Eclipse, Unreal Engine, Android Studio, Xcode
**Technologies/Frameworks**: Git, GitHub, Jekyll, Django, AppStore, Google Play Store, Slack, Microsoft Teams, Discord
**Spoken Languages**: German (conversational)

## Activities and Leadership

**ACM Game Builders**                                                            **Spring 2021 – Fall 2022**
*Officer*                                                            *University of Illinois Urbana-Champaign*
- Developed and led introductory Unity workshop with highest club event turnout
- Interacted actively with organization members to answer development questions

**Girls Who Code**                                                               **Fall 2020 – Fall 2022**
*Facilitator*                                                       *University of Illinois Urbana-Champaign*
- Collaborated with team to develop and run Python game development workshop and introductory Java lessons
- Involved at various times in different capacities since high school

## Papers

**MineObserver 2.0: A Deep Learning & In-Game Framework for Assessing Natural Language Descriptions of Minecraft Imagery**
*Dec 2023*