Samantha J. Zhang

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EDUCATION

Cornell University, College of Engineering, Ithaca, NY **Expected May 2023**

GPA: 3.98 • Bachelor of Science, Computer Science • Dean's List for all semesters • Tau Beta Pi Service Chair

Relevant Courses: Analysis of Algorithms | Data Structures and Functional Programming | Object-Oriented Programming and Data Structures | iOS Development | Machine Learning | Computer System Organization | Intro to Game Architecture | Discrete Structures | Computing Using Python | Digital Product Design

RELEVANT EXPERIENCE

Epic Games, *iOS Mobile Engineer Intern* **May 2022 – August 2022**

- Worked within a team of 7 engineers using SwiftUI, Jetpack Compose, and Kotlin Multiplatform to develop features for a new mobile app that provides editing functionality for video clips.
- Led development for public service announcement feature, enabling production team to communicate messages to userbase.
- Implemented feature allowing users to drag stickers from a sticker sheet onto a video clip to enhance the user experience.
- Researched Apple VoiceOver capabilities for sticker gesture interactions to ensure accessibility for visually impaired users.

Cornell Nexus, *Software Lead* **March 2021 – Present**

- Collaborate with a diverse team of 23 students to make an autonomous robot that will collect microplastics from beaches.
- Lead team of 8 programmers, setup Github automated test suite and pull request template, manage Jira tasks, and create cross-discipline software documentation.
- Design communication between GUI and Raspberry Pi and parsing telemetry data transmitted by a RF module.
- Developed real-time display for robot data such as status, geolocation, and traversal and custom command-line using Python libraries such as PySimpleGUI and Matplotlib.

Neural Networks for Meta-Emotions, *National Science Foundation REU Undergraduate Research Assistant* **June 2021 – July 2021**

- Amongst 10 out of 292 students selected for Georgia State's Research Experience in Immersive Media Computing.
- Humanized NPCs by using data derived from acting footage to train a Recurrent Neural Network for determining and animating lifelike NPC facial expressions in Unity.
- Created 3D polygon meshes of actors' faces from stills using Blender to animate and visualize results.

PROJECTS

Cupdrakes, *Intro to Game Architecture* **Spring 2022**

- Won the audience favorite award at GDIAC 2022 showcase of 12 student games.
- Collaborated with programmers, designers, and composers daily to build a turn-based strategy game using Java.
- Implemented UI screen elements, in-game navigation system, tutorialization, and user input handling.
- Designed prototypes for game interactions in Figma.
- Iterated on level design and game elements based on playtesting and player feedback.

Challenge With Friends, *iOS Development* **Spring 2021**

- Selected as best overall app in Cornell AppDev Hack Challenge against 18 student teams.
- Designed and implemented iOS app featuring tab-based navigation system, user login portal, data filtering, and encoding/decoding images using Figma and Swift.
- Integrated with backend team members' custom API deployed on Heroku using Alamofire & CocoaPods.

Stuck In the Desert, *Data Structures and Functional Programming* **Spring 2021**

- Collaborated with team members to create a fully functional RPG top-down puzzle exploration level-based game.
- Implemented main game logic and GUI using OCaml Graphics library and camlimages'.

Instagram Case Study, *Digital Product Design* **Spring 2020**

- Designed and prototyped a custom navigation and categorization of feeds to improve Instagram user experience (UI/UX).

Virtual Reality World (SOHA), *Visual Imaging in the Electronic Age* **Fall 2019**

- Developed an immersive virtual reality experience with architecture and urban planning students using the Unreal Engine.

ADDITIONAL EXPERIENCE

Cornell Engineering Peer Advisor **August 2021 – December 2021**

CS 1110 Python Academic Excellence Workshops (AEW) Facilitator **August 2021 – December 2021**

Women In Computing at Cornell (WICC) Girls Who Code Volunteer **February 2020 – May 2021**

SKILLS

- **Programming Languages:** Java, Python, SwiftUI, Swift, OCaml
- **Applications/Tools:** Github, Figma, IntelliJ IDEA, VSCode, XCode, PyCharm, Sketch, iMovie, Unreal Engine, Unity