**Samantha J. Zhang**

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**OBJECTIVE**

A software engineering internship position that will enable me to utilize my programming and design skills to enhance a company’s products and services.

**EDUCATION**

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

Bachelor of Science, Computer Science • GPA: 3.96 • Dean’s List for all semesters

***Relevant Courses:*** Object-Oriented Programming and Data Structures, Discrete Structures, Data Structures and Functional Programming, Computing Using Python, iOS Development, Digital Product Design

**RELEVANT EXPERIENCE \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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

* 1 of 10 out of 292 students selected for Georgia State University’s Research Experience for Undergraduates in Immersive Media Computing
* Humanizing NPCs by using data derived from acting footage to train a Recurrent Neural Network for determining and animating lifelike NPC facial expressions in Unity for Neural Networks for Meta-Emotions research project
* Created 3D polygon meshes of actors’ faces from stills using Blender to animate and visualize results

**AI Bot Gaming Platform**, *Full-Stack Intern* **December 2020 – February 2021**

* Implemented a multiplayer online game of Dots and Boxes in a Python web server deployed in a docker container in AWS
* Setup a new lambda deployment pipeline to AWS in a docker container for automatically updating games

**Mobileware Inc.**,*Design Intern* **May 2020 – August 2020**

* Designed logos, custom icons, promotional images, and mockups to improve usability for social media, website, and mobile applications using Sketch and Figma

**EXTRACURRICULAR ACTIVITIES**

**Cornell Nexus,** *Software Team* **March 2021 - Present**

* Working with a diverse team of 23 students to make an autonomous robot that will collect microplastics from beaches and oceans
* Designed robot control GUI on Figma and implementing it using Python libraries such as PySimpleGUI and Matplotlib
* Developing real-time display for robot data, status, geolocation, and traversal history as well as interactive features such as autonomous/manual control and a command-line

**Women In Computing at Cornell (WICC) February 2020 - May 2021**

* *Girls Who Code Volunteer*:Guided high schoolers weekly through exercises in Python designed to help them learn fundamental programming concepts and mentored a student on a guessing game project created from scratch
* *Photo and Film Committee*:Created and edited videos encouraging diversity and fostering a CIS community
* *Undergraduate Mentor*:Met with CIS underclassmen weekly, held socials, and provided guidance

**PROJECTS**

[**Challenge With Friends**](https://github.com/sazhang02/AppDevHackChallenge), *iOS Development*  **Spring 2021**

* Won 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
* Integration with backend team members’ custom API deployed on Heroku using Alamofire & CocoaPods

[**Stuck In the Desert**](https://github.com/sazhang02/CS-3110-Final-Project), *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**](https://medium.com/@sjz46/instagram-concept-an-alternative-to-scrolling-past-posts-7445f592b6c), *Digital Product Design* **Spring 2020**

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

[**ChewQueue**](https://www.figma.com/proto/YSXPWkmC3BhqieXJ3bdVMZ/ChewQueue?page-id=11%3A40&node-id=135%3A2286&scaling=min-zoom), *HackOurCampus*  **August 2020**

* Collaborated with 3 other Cornell students to create an online ordering system hack addressing de-densifying overcrowded on-campus dining locations

[**Virtual Reality World (SOHA)**](https://github.com/sazhang02/Unreal-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

**SKILLS**

* **Programming Languages:** Python, Java, OCaml, Swift
* **Applications/Tools:** Github, VSCode, Atom, Eclipse, Figma, Sketch, iMovie, Unreal Engine, Unity, & Blender