

# Richard Gu

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## EDUCATION

### Cornell University

August 2021 – May 2025

Bachelor of Arts in Computer Science | GPA: 4.0 | Dean's List (All eligible semesters)

Ithaca, NY

**Current Courses:** Analysis of Algorithms, Functional Programming, Statistics & Probability, Marketing, Backend Development

**Relevant Coursework:** Data Structures, Object-Oriented Programming, Discrete Structures, iOS Development, Linear Algebra

## EXPERIENCE

### Niantic, Inc.

May 2022 – August 2022

Software Engineer Intern

Palo Alto, CA

- Spearheaded the development of a new client onboarding page for Niantic's 8<sup>th</sup> Wall, the industry's leading WebAR development platform, enhancing the experience for 10,000+ AR developers and boosting user activation/retention
- Developed client-facing features using TypeScript, React.js, Redux, and JSS to streamline new developers' access to interactive tools, frameworks, and guidance – extensively used Google's YouTube API and internal APIs to query dynamic collections of personalized content for both new and returning users
- Revitalized Partners page UI with cards displaying 54 partners' highlighted information to aid corporate customers in finding verified WebAR agencies to help bring their AR experiences to life, boosting requests by 17% in 30 days
- Created a localization search tool using Node.js and Google Maps API to help find relevant Partners and maintain a server-side cache of partners' location data – use AWS Elastic Beanstalk to safeguard API key environment variables

### Cornell Design & Tech Initiative

February 2022 – present

Software Developer

Ithaca, NY

- Built a networking-friendly web platform – ClubView – in TypeScript, React.js, Next.js, Node.js, and CSS designed to help students from all backgrounds explore on-campus organizations and find their fit
- Led implementation of club search by category feature & club info pages using Next.js and MUI component library
- Collaborate in a startup-style team, communicating with product managers and designers to ensure efficient & quality shipment of features – conduct 5 user interviews monthly to inform future features and refactoring

### Cornell University Computing and Information Science

August 2022 – present

Teaching Assistant

Ithaca, NY

- TA for CS 2110 – Object-Oriented Programming & Data Structures. Led discussion section and graded assignments.

## TECHNICAL SKILLS

**Languages:** Java, Python, JavaScript/TS, C++, CSS, Swift, OCaml **Platforms:** Google APIs, AWS, Firebase, MongoDB

**Tools, Libraries and Frameworks:** Git, React.js, Next.js, Redux, Node.js, JSS, UIKit, SwiftUI, Django, Figma, Blender

## PROJECTS

### Optimized pathfinding simulation

Java, Dijkstra's algorithm, graph traversals

- Competed with 700+ other students to develop the highest scoring, fastest and most efficient algorithm to find the quickest path to an orb and collect the most gold while fleeing to a collapsing cavern's exit
- Perform an intelligent depth-first search walk to find the shortest path to an orb using blind info without a map
- Implement Dijkstra's shortest path algorithm and use HashMaps & Heaps to linearly optimize the amount of gold the character collects while fleeing from a cavern, performing in the top 5% of participants.

### Alien Invaders

Python, Coroutines

- Independently created a complex game in Python replicating the original 1980s Space Invaders arcade game, allowing a player to control a ship with keyboard that they can use to shoot at an oncoming wave of aliens that shoots back
- Created ability to collect coins from increasingly difficult rounds that can be used to purchase power-ups and cool gadgets. Implement frame by frame movements, animate ship/alien explosions using coroutines & sprite sheets

### CU FindIt

SwiftUI, UIKit, Django

- Developed a Lost & Found app for Cornell students using SwiftUI and UIKit. Collaborated in a five-person team with Backend and Design partners to create a dynamic app for users to report lost items or add items they lost to database.