

# Alice Gao

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## EDUCATION

### University of Washington

PhD in Computer Science & Engineering (MSc received Spring 2022)

Sep 2021 – *expected Dec 2026*

Seattle, WA

### Princeton University

BSE in Computer Science | GPA: 3.73 departmental, 3.58 overall

Sep 2017 – Jun 2021

Princeton, NJ

## RESEARCH EXPERIENCE

### Research Assistant

Wildlab · University of Washington

Jan 2024 – Present

Seattle, WA

- Developing neural network to detect most salient regions per demographic group from UI designs and provide UI recommendations through visualization techniques
- Developing a full-stack web application to define cross-cultural emojis and provide contextual use cases based on demographics from crowdsourced data
- Conducted mixed-methods approach to investigating cultural differences in IM tool usage between US and Japan

### Research Assistant

GRAIL · University of Washington

Sep 2021 – Jan 2024

Seattle, WA

- Researched and developed methods to correctly focus attention and eye gaze by training a neural network, providing a more engaged video conferencing experience

### Undergraduate Research Assistant

Princeton Vision & Learning Lab · Princeton University

Sep 2019 – Feb 2021

Princeton, NJ

- Researched and developed methods to improve associative embeddings for instance segmentation in a one-stage object detector

## INDUSTRY EXPERIENCE

### Software Engineering Intern | Java, Docker

Online Account Opening · Capital One

Jun – Aug 2020

New York, NY

- Created the endpoint of a new API for Single Sign On (SSO) Enrollment, which was deployed to QA, moving this service out of jBPM to more efficiently use microservices Cucumber and Gherkin for endpoint integration and Mockito for unit tests
- Built the framework for a streaming data platform to create new applications when opening an account, enabling local testing with Docker
- Deployed new security groups using Nimbus for a new SSO Enrollment API for QA and production

### AI Design Lab Intern | Python, Flask

Tezign

Jun – Aug 2019

Shanghai, China

- Optimized image retrieval to match similar designs and contributed to the pipeline for helping to train a model in judging strong vs weak graphic designs
- Used Flask for the company's backend and API for a company-specific, cloud-based file system

### Technical & App Development Intern | Swift, Fusion360

Princeton Satellite Systems

Jun – Aug 2018

Princeton, NJ

- Devised scene graph gameplay and developed a method to render text to keep score in OpenGL/GLKit for the spacecraft simulation iOS app
- Created 3D models for the Phase II version of Direct Fusion Drive (DFD), a direct-drive, fusion-powered rocket engine that can generate controllable power from 1-10 MW

## TECHNICAL SKILLS

**Languages:** Python, R, SQL, TypeScript, JavaScript, C, Go

**Frameworks:** PyTorch, scikit-learn, ReactJS, Svelte, Node.js, Django, DRF, Flask

**Tools:** Docker, Apptainer

**Research:** ML, LLMs, RAGs, Interview studies, Thematic analysis, Survey design, Statistical analysis