

# Lucy Hao

✉ [hao.lucyy@gmail.com](mailto:hao.lucyy@gmail.com) | [in linkedin.com/in/lucy-hao](https://www.linkedin.com/in/lucy-hao) | [gh lhao03](https://github.com/lhao03) | [lhao03.github.io](https://lhao03.github.io)

## Education

University of British Columbia

Bachelor of Science in Computer Science and minor in Biochemistry

Sep 2019 - May 2023 (Expected)

cGPA: 3.90/4.33

## Work Experience

Microsoft

May - Aug 2021

Software Engineering Intern (Garage Program)

- Collaborated with a team of 6 interns to plan and develop a internal team requested feature in React, Redux and TypeScript which allowed developers to efficiently and easily try out the Microsoft Graph API.
- Presented technical architectural diagrams to developers and developed proof of concepts to decide on technical designs. Added static analysis tools and pre-commit hooks, saving time for PR reviews.
- Led development of the user interface for the Teams App and new internal feature for the Graph Explorer, actively communicating with the Program Manager intern and the UX intern to seek feedback.
- Refactored the Teams App code-base, removing over **500+** lines. Fixed critical bug freezing the Teams App and discovered bug within Graph Explorer and had the fix merged into the live production application.

PROOF (Prevention of Organ Failure) Centre of Excellence

Jan - May 2021

Software Developer Co-op

- Redesigned a fragile natural language processing pipeline to extract patient information from any type of clinical note. Implemented in Python using pandas, nltk, scispaCy, spaCy and regular patterns. Helped publish a preprint on medRxiv.
- Introduced algorithms to auto-correct optical character recognition errors for Features of Interest (FoI), increasing accuracy for a FoI by **5-10%**. Added a training module to automatically find the best pipeline parameters in training period.
- Reduced the encoding code-base size by over **50%** while increasing pipeline accuracy. Achieved **91%** validation accuracy on a hundred unseen clinical notes.
- Gave weekly presentations to medical professionals, faculty members and data scientists to show progress on pipeline and request feedback.

University of British Columbia

Jan - Apr 2021, Jul - Aug 2021

Computer Science Teaching Assistant

- Led **3** labs for CPSC 210 (Software Construction) of overall **20** students.
- Held weekly office hours to help students learn about Test Driven Design, Java and Object Orientated programming. Invigilated, marked, and tested exam questions.

## Projects

**Dialogue** | JavaScript, MongoDB, Express.js, WebRTC, Heroku, Git, Figma

nwHacks 2021

- Full-stack web application using Express.js and MongoDB for the backend and React for the frontend.
- Used MongoDB to store user's info and created algorithm to match users with similar interests.
- Implemented video calling functionality with socket.io, WebRTC in the browser. Deployed on Heroku.
- Average score of **80-90%** from peer judges.

**EcoEats (Finalist)** | Google Cloud Vision API, Java, Android, Git, Figma

cmd-f 2020

- Android app in Java that brings awareness to the carbon footprint of consumers' meals and advocates for more carbon-friendly products.
- Uses Google Cloud Vision API to analyze photos of food. Presented project to all participants and judges as finalists (top 5) among **200+** hackers. Awarded Realtor Best Search Experience and Wolfram Award.

## Extracurricular

- Director of Outreach and Technology at StarHacks, Marketing Coordinator at nwPlus, JoytoJob Panelist, Hydrangea Hacks Workshop Host, StarHacks Workshop Host, Citro Hacks Workshop Host, Hacking 4 Community Panelist