

# Lucy Hao

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## Education

University of British Columbia

Bachelor of Science in Computer Science and minor in Biochemistry

Sep 2019 - May 2023

cGPA: 3.90/4.33

## Work Experience

Software Engineering Intern

May 2021 - Aug 2021

Microsoft - Garage

- Collaborated with team of 6 other interns to plan and develop a internal team requested feature from the ground up in React, Redux and TypeScript to allow developers to efficiently and easily work with the Microsoft ecosystem.
- Conducted user research and used over **10+** responses to design first iteration of user interface for feature. Presented technical architectural diagrams to the rest of the developers and developed proof of concepts to decide on technical design.
- Led development of user interface for Teams App and new feature for a live production application, actively communicating with Program Manager intern and UX intern to seek feedback.
- Reviewed teammates pull requests, maintained forked GitHub repositories by fetching upstream and resolving merge conflicts and set up linting rules to maintain code standards. Reviewed and approved over **44+** pull requests, the most of any other intern.
- Refactored Teams App codebase, 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.

Software Developer Co-op

Jan - May 2021

PROOF (Prevention of Organ Failure) Centre of Excellence

- Redesigned a fragile natural language processing pipeline to be more robust 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 an FoI by **5-10%**. Added a training module to automatically find the best pipeline parameters in training period.
- Abstracted parts of pipeline to be able to generalize on any type of clinical note. Reduced encoding code-base size by over **50%** while maintaining or increasing pipeline accuracy. Achieved **91%** validation accuracy on 100 unseen clinical notes.
- Gave weekly presentations to medical professionals, faculty members and data scientists to show progress on pipeline and request feedback.

Computer Science Teaching Assistant

Jan - Apr 2021, Jul - Aug 2021

University of British Columbia

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

## Extracurricular

Director of Outreach and Technology

Sep 2020 - now

StarHacks

- Led outreach operations of the first iteration of StarHacks (female and non-binary virtual hackathon), bringing in **800+** registrants and **350+** attendees in the span of 3 months. Grew Instagram followers by **300%** (414 to **1250+**)
- Sent monthly newsletters with MailChimp and posted original content designed with Figma and Canva on Instagram and Twitter. Moderated Discord and set up Discord bots to remind hackers of events and automate role assignment.