

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 - now

Microsoft (Garage)

- The Garage internship offers a small number of talented students a unique opportunity to work with each other in teams, hack on contemporary technology, conduct customer research, design, and develop a product in 12-16 weeks.

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

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.

Projects

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

Jan 2021

- In team of 4, developed a 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

Mar 2020

- In 24 hours as lead programmer of a group of 4, developed an 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 among **200+** hackers. Awarded Realtor Best Search Experience and Wolfram Award.

Extracurricular

- **Speaking:** [JoytoJob Panel](#), [StarHacks Workshop Host](#)
- **Community:** Director of Outreach and Technology at [StarHacks](#), Marketing Coordinator at [nwPlus](#), mentor at [AIHacks](#) and [SuperPosition](#), mentor for [connect-f 2020](#)