

IVY LIU

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EDUCATION

Columbia University
M.S. in Data Science

New York, NY, US
Sep 2020 – Dec 2021

University of Waterloo

B.S. in Computer Science, GPA: 90/100, Dean's Honors List: 2016-2020

Waterloo, ON, CA

Aug 2020

Coursework: Artificial Intelligence, Software Design and Architectures, Human-Computer Interactions

WORK EXPERIENCE

University of Waterloo, David R. Cheriton School of Computer Science

Waterloo, ON, CA

Undergraduate Research Assistant

Jan 2020 – Apr 2020

- Generalized an analog meter reader system and automated the reading process for all analog meters using Computer Vision in Python.

McAfee LLC

Waterloo, ON, CA

Software Developer

May 2019 – Aug 2019

- Designed and developed reusable automation programs in Python, verified essential functionalities and content structures of McAfee LiveSafe's UI components using Selenium Web driver and BeautifulSoup.
- Spearheaded a multithreaded inter-process communication C++ program by creating a named pipe and through Windows APIs including threads, synchronization and inter-process communication.
- Coordinated with multiple development teams for scalability validation and code testing with Google Mock.

University of Waterloo, Frank Gu Nanotechnology Lab

Waterloo, ON, CA

Research Assistant

Sep 2017 – Apr 2018

- Performed extensive research on dextran nanoparticles and synthesized artificial tears with oxidized dextran and adipic acid dihydride to simulate human eye environment.
- Analyzed particle size and concentration under different wavelengths, absorbent rates utilizing NMR, DLS and UV-VIS.
- Optimized solution concentration by applying regression models and improved treatment effectiveness by 11%.

PROJECTS

UX Project: High Fidelity Prototyping, Human-Computer Interaction (HCI)

Waterloo, ON, CA

UX Designer

May 2020 – Aug 2020

- Applied core HCI concepts to develop a travel app prototype and published a blog describing the process on Medium.

Entrepreneurship: Mobile App for Online Food Delivery, Swift, Machine Learning

Toronto, ON, CA

Software Developer and Co-founder

Jul 2018 – Dec 2019

- Collaborated with the founding team in initial application prototyping and delivery route optimization by training on over 100 G of geospatial data; reduced potential delivery cost by CAD 80,000.
- Led the team to develop a product recommender system by applying product association rule mining algorithm in Python.

Yale Hackathon: Disease Diagnosis App using Facial Recognition, Machine Learning

New Haven, CT, US

UI Designer and Software Developer

Dec 2017

- Wrangled image training data and implemented machine learning algorithms for facial key point recognition in Python.

SKILLS

Programming Languages: C/C++, Python, Java, HTML&CSS, JavaScript, MATLAB, SQL, Scheme

Interests and Hobbies: piano, guitar, dancing, rock climbing