

# HAIYUE YANG

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## EDUCATION

### University of Toronto

Toronto, Canada

*Honours Bachelor of Science with a Professional Experience Year* [GPA: 3.95/4]

Sep 2018 - Jun 2023

- **Specialists:** Computer Science (Focus in AI) & Data Science | **Minor:** Economics
- **Honors:** Dean's List Scholar(2021, 2020, 2019), In-Course Scholarships(2020, 2019), Admission Scholarship(2018)
- **Programming:** Python, C, C++, C#, Java, Go

## WORK EXPERIENCE

### Deep Genomics

Toronto, Canada

*Software Engineer Intern, Lab-Data Software Engineering Team* [Python, Go, React]

Aug 2021 - Jul 2022

- Independently built a self-serve tool to manage experiment data on **300+** cell-lines using **Python** and **React**.
- Built and re-constructed data pipelines to transport data from the experiment and machine learning team using Python;
- Added new features to service that handles **100+** new orders everyday to enable auto-generation of orders using **Go**.

### Microsoft

Suzhou, China

*Software Engineer Intern, Data Metric & Analysis Group* [C#, SQL, Scope]

Jun 2021 - Aug 2021

- Collected data of **billions of users** from Microsoft News, manipulated and formed metrics using **Scope scripts**, analyzed and stored results to databases using **SQL Server** stored procedure.
- Developed API to retrieve data from database and demonstrate analyzed results on Health Dashboard using **C#**, accelerating the procedure to gain business insights from data.

### GoalBullish Automation Equipment Co. Ltd

Chengdu, China

*Software Developer Intern, Research & Development Department* [C, C++, SQLite, Qt]

May 2020 - Aug 2020

- Designed and developed software to monitor status of sensors, manipulate and upload data to cloud for remote sensing using **C** and **SQLite**; Used on **3000+** fire alarm devices, each monitoring up to **100** sensor;
- Developed software to set up configuration database and visualize status of sensor using **C++** and **Qt**.

## RESEARCH EXPERIENCE

### Third Space Research Group, DGP Lab, University of Toronto

Toronto, Canada

*Research Assistant, Supervisor: Prof. Syed Ishtiaque Ahmed*

Apr 2022 - Present

- Analysis on Stigmatizing COVID-19-related Tweets: collected and maintained a dataset of **650+ million** tweets, measured reliability and validated labels in dataset;
- Analysis on Iran-Protest-related Tweets: collected and maintained **4 million** tweets, conduct social network analysis.

### Energy Internet Research Institute, Tsinghua University

Chengdu, China

*Research Assistant, Research Center for Energy Strategy and Operations*

May 2019 - Jun 2019

- Developed models to predict future power generation of hydropower stations based on weather data;
- Participated in research about the electricity market and power system economic operations.

## PROJECT EXPERIENCE

### Department of Computer Science Innovation Lab (DCSIL), University of Toronto

Toronto, Canada

*Capstone Design Project, Industry Partner: Royal Bank of Canada (RBC)*

Sep 2021 - Dec 2021

- Built a marketing platform to help generate adaptive offers based on the user's consumer preferences;
- Generated mock data for training, designed and developed data pre-processing pipeline, tested and adjusted ML models.

### Data Science Projects

Toronto, Canada

*Supervisor: Prof. David Duvenaud*

Jan 2021 - May 2021

- Built a PMF model with **91.07%** accuracy to recommend movies to users based on previous ratings;
- Resampled imbalanced data and constructed logistic regression of **90.9%** accuracy to predict soccer players' goal rates;
- Built time series models to predict electric load based on consumption and weather data, decreased MSE by **64.2%**.

### Data Analysis Projects

Toronto, Canada

*Supervisor: Prof. Fanny Chevalier*

Jan 2020 - May 2020

- Investigated dwell time of pedestrians in different areas and events, developed algorithms to schedule maintenance.
- Analyzed about starting a coffee business in Toronto based on Yelp dataset;
- Analyzed and visualized ridership data of TorontoBikeShare and the relationship with weather.