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# Houlin Chen

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## EDUCATION

### University of Toronto

*Honours Bachelor of Science, Double Majors in Mathematics and Statistics*

Fall 2020 – Winter 2024

Mathematics: Groups and Symmetries, Complex Variables, and Nonlinear Optimization.

Statistics: Methods of Data Analysis I, Methods for multivariate data, and Applied Bayesian Statistics.

### Renmin University of China and Nankai University

*Visiting Student*

Summer 2021

## RESEARCH EXPERIENCE

### University of Toronto

Toronto, ON, CA

*Machine Learning Project, Undergraduate Research Assistant*

Summer 2022

- Established a 3D indoor positioning system based on a radio frequency sensor capturing small-scale fading and Gaussian process regression [1].
- Developed a dynamic data driven application system based on signals of opportunity with Dirichlet process clustering and ensemble learning [2].

### Renmin University of China and Nankai University

Beijing and Tianjin, CN

*Sociology Research Project, Undergraduate Research Assistant*

Summer 2021

- Discussed with university professors and students in different countries on love, marriage, and sexuality, and higher education or health.
- Summarized 3 journals about what was learned from lectures, including the Agrarian Reform, Family Planning, and growth of underground gay organizations in China.
- Wrote a research essay entitled RESEARCH AND SOLUTION OF VIOLENT LAW ENFORCEMENT OF URBAN MANAGEMENT.

## INTERNSHIP

### AP Lazer

Windsor, ON, CA

*Marketing Data Analysis*

Sept 2022 – Present

- Running paid search and paid social media ad reports, calculating ROI, and making summary and comparison tables.
- Analyzing the effectiveness of each campaign, ad group, and ad.
- Combining the static information from the CRM program to provide a focused and simplified data table for the marketing team to improve the ads.

## PUBLICATIONS

- [1] L. Yuan, H. Chen, R. Ewing, and J. Li, "Passive Radio Frequency-based 3D Indoor Positioning System Via Ensemble Learning," *Dynamic Data Driven Applications Systems (DDDAS) 2022*, arXiv:2304.06513, Oct. 2022. (Oral Presentation, Book Chapter).
- [2] L. Yuan, H. Chen, R. Ewing, E. Blasch, and J. Li, "Three Dimensional Indoor Positioning Based on Passive Radio Frequency Signal Strength Distribution," *IEEE Internet of Things Journal*, Mar. 2023.

## ACADEMIC SERVICES

### Journal Review

IEEE Access

May 2023 – Present

## AWARDS

University of Toronto Entrance Scholarship

Fall 2020

## SKILLS

Tools	R Studio, Python, Matlab
Languages	Markdown, $\text{\LaTeX}$ , Overleaf
Communication	Chinese (native), English (IELTS: 7.0, GRE: 332)