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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

- Engaged in extensive debates with professors and students in different countries on love, marriage, and sexuality, higher education, and health.
- Composed 3 three short commentaries on subjects of agrarian reform, family planning, and the growth of underground LGBTQ+ organizations in China.
- Wrote a perspective paper about the solution of violent law enforcement of urban management.

INTERNSHIP

AP Lazer

Windsor, ON, CA

Marketing Data Analysis

Sept 2022 – Present

- Organizing and summarizing the marketing sales, as well as various data details under each campaign, providing a comprehensive understanding of marketing efforts.
- Running both paid search campaigns on Google and paid social media campaigns on Meta Facebook, calculating Return on Investment (ROI), and creating summary and comparison tables for these ad reports.
- Analyzing the performance of each campaign, ad group, and individual ad from Google Advertisement and Meta Facebook.
- Combining the static information from the Customer relationship management (CRM) program to provide a highlighted and simplified data table, and providing guidance for the marketing team to improve the ads.

PUBLICATION

- [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*, vol. 10, no. 15, pp. 13 933–13 944, Mar. 2023.

ACADEMIC SERVICE

Journal Reviewer

IEEE Access

2023 – Present

Membership

Association for Computing Machinery (ACM)

2023 – Present

American Statistical Association (ASA)

2023 – Present

Institute of Electrical and Electronics Engineers (IEEE)

2023 – Present

AWARD

University of Toronto Entrance Scholarship

Fall 2020

SKILL

Tools

R Studio, Python, Matlab

Languages

Markdown, \LaTeX , Overleaf

Communication

Chinese (native), English (IELTS: 7.0, GRE: 332)