# Edric Nathaniel H.G. Ho

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## EDUCATION

**University of Toronto** Toronto, ON
Major: Computer Science/Neuroscience/Applied Maths Sep. 2022 - Present
Relevant Coursework: Statistical Reasoning and Data Science, Data Structures and Analysis, Major GPA: 4.0
Computer Organization, Molecular and Cell Biology, Organic Chemistry, Psychology, Neurogenomics, Clinical Neuroimaging.

- Department of Statistical Sciences Research Award
- Recognized Study Group Leader
- Summer Research Student

## EXPERIENCE

**Research Assistant** Toronto, ON
*Statistical Sciences Department at University of Toronto* Apr. 2024 - Aug. 2024

- Participated in a collaborative research project aimed at integrating ChatGPT into university Statistics coursework, focusing on its application for improving problem-solving and statistical communication.
- Co-developed new curriculum content, including the creation of complex, multi-part statistical questions and tutorial materials that leverage AI technology to enhance learning outcomes.
- Conducted comprehensive reviews and adaptations of existing statistical teaching materials to include AI tools, enhancing the practical application of statistical concepts.
- Contributed to the analysis and manuscript preparation reporting on the efficacy and challenges of ChatGPT within an educational context, aimed for publication in a peer-reviewed journal.

**Research Paper Co-Editor** Toronto, ON
*Statistical Sciences Department at University of Toronto* Nov. 2023 - Feb. 2024

- Engaged in the editorial process of academic research papers, emphasizing statistical methodologies and economic implications in media representation studies.
- Collaborated extensively with department faculty to refine research methodologies, enhance data interpretation, and ensure the rigorous academic quality of publications.
- Applied sophisticated statistical tools including p-value assessment, chi-square tests, and logistic regression to critically evaluate research on cultural economics and identity-based consumer preferences.

**Clinic Administrative Assistant** Vancouver, BC
*Matters of Health, Medical Clinic* Jan. 2021 - Jul. 2021

- Managed over 50 daily administrative tasks, including document editing and scheduling 15 daily appointments, significantly enhancing clinic operational flow and patient satisfaction.
- Oversaw the accurate and confidential management of clinical databases containing over 1,000 patient records, while also explaining medical test results to approximately 20 clients daily, improving patient understanding and responsiveness to care.

## PROJECTS

**UNICEF Sandbox Showcase** Toronto, ON
*Project Link:* `https://github.com/Edric-He/STA130-UNICEF-SANDBOX-SHOWCASE` Dec. 2023 - Completed

- Co-developed a machine learning project that measures the accuracy of 4 Machine learning Algorithms predicted global conflict escalation for UNICEF, incorporating complex statistical analyses and multiple linear regression.
- Our approach, recognized by Prof.Schwartz for its innovative handling of confounding variables, stood out for its advanced inference techniques and strategic contribution to humanitarian aid optimization.
- Demonstrated exceptional skill in applying multidisciplinary knowledge from Psychology, Computer Science, Ethics, and Statistics to address real-world challenges.

**Research on Unsupervised Learning Algorithm** Vancouver, BC
*Project Link:* `https://github.com/Edric-He/PARTITIONAL-HIERARCHICAL-CLUSTERING` Jul. 2021 - Completed

- Conducted a comparative study of partitional and hierarchical clustering techniques, specifically focusing on their application in classifying music data.
- Utilized a comprehensive dataset from Kaggle to implement and analyze both K-means and agglomerative hierarchical clustering methods, assessing their effectiveness in statistical grouping based on song attributes.
- Utilized advanced data preprocessing techniques, including PCA for dimension reduction and outlier detection methods (IQR, Local Outlier Factor), to enhance clustering robustness. Assessed algorithm performance using mean squared error and silhouette scores, highlighting practical applications and data handling limitations.

## SKILLS

- **Programming Languages:** Python, Java, C, Racket, HTML5, CSS3, Javascript, SASS
- **Libraries/Frameworks:**
  - **JavaScript-related:** React, Angular, Redux, Node.js, Async, JWT, JSON
  - **Python-related:** Numpy, Scipy, Plotly, Matplotlib, Sklearn
  - **CSS-related:** Flex Responsive Design Layout, Mobile First Design
- **Database-related Technologies:** TypeORM, MySQL, Redis
- **Cloud Services:** AWS EC2, S3
- **Server-related Technology:** Nginx
- **Development Environments/Software:** IntelliJ, DataSpell, Webstorm, VSCode, PhpStorm