

# Ian Zhang

## Curriculum Vitae

📍 Toronto, ON, CA    ✉ ianz.zhang@mail.utoronto.ca    ☎ +1 (780) 909-2566    🌐 ian-zhang.com

### Education

**University of Toronto** Sept 2021 – June 2025  
*Honours BSc in Statistics*

- **Coursework:** Data Analysis, Probability, Machine learning, Mathematical Statistics, Time Series Analysis, Stochastic Processes, Calculus, Linear Algebra

### Experience

**Research Assistant** Edmonton, AB  
*University of Alberta* May 2023 – Aug 2024


- Awarded 2 scholarships from Natural Sciences and Engineering Research Council of Canada
- Researched deep fake simulation/detection methods
- Helped design and implement a model involving Hidden Markov Models with a GAN-like structure

### Publications


#### In progress

**Markov Processes for Enhanced Deepfake Generation and Detection** 2024  
Bhadana, J., Kouritzin, M. A., Park, S., **Zhang, I.**  
<https://arxiv.org/abs/2411.07993>

### Projects

**Pomodoro Clock with Deep-learning Implementations** [GitHub](#) 

- Developed a pomodoro clock that implements deep-learning, NLP, and generative AI to provide adaptive productive insights, integrated real-time tracking, and task categorization
- Designed to help individuals keep on track and minimize the amount of work required to plan tasks and budget time
- Tools Used: PyTorch, Scikit-Learn

**Personal Website** [link](#) 

- Created a personal portfolio website to showcase my projects and academic work
- Website highlights my web development skills, Git version control, and responsive design practices
- Tools used: HTML, CSS, GitHub Pages

### Honours and Awards

**NSERC Undergraduate Student Research Award** 2023, 2024  
Awarded to conduct research during the 2023 and 2024 Spring/Summer terms under the supervision of Professor Mike A. Kouritzin at the University of Alberta NSERC, UofA

**Jack Zwaigenbaum Scholarship** 2022  
Awarded for academic excellence in the 2021-2022 school year University College, UofT

**Dean's List Scholar (x3)** 2022, 2023, 2024  
Awarded for maintaining academic excellence throughout my undergrad FAS, UofT

## Technical Skills

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**Programming Languages:** Python, R, SQL, Java, MATLAB, Julia

**Tools and Frameworks:** PyTorch, VS Code, JupyterHub, RStudio, GitHub

**Languages Spoken:** English (native), Mandarin (native), Japanese (intermediate)