

# Yihan Zhou (Joey)

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## EDUCATION

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### The University of Texas at Austin

*PhD in Computer Science, currently working with Eric Price*

Austin, TX

Sep 2021 – Now

### The University of British Columbia (Major Average: 91.1/100)

*Master of Science in Computer Science, co-supervised by Mark Schmidt and Nick Harvey*

Vancouver, BC

Sep 2018 – Aug 2020

### University of Waterloo (Major Average: 90.13/100)

*Bachelor of Mathematics in Computer Science, Joint Major in Combinatorics and Optimization*

Waterloo, ON

Jan 2015 – Aug 2018

## RESEARCH PROJECTS

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### A Competitive Algorithm for Agnostic Active Learning

E. Price, **Y. Zhou**. *NeurIPS 2023*

- We developed a polynomial algorithm for active binary classification whose query complexity is never worse than a multiplicative log factor of the best possible algorithm and showed a matching lower bound.

### Analyzing and Improving Greedy 2-Coordinate Updates For Equality-Constrained Optimization via Steepest Descent in the 1-Norm

A. V. Ramesh, A. Mishkin, M. Schmidt, **Y. Zhou**, J. W. Lavington, J. She. [[arXiv](#)]

- We developed fast greedy 2-coordinate descent algorithms for smooth functions with sum and box constraints and derived convergence rate bounds.

### Regret Bounds without Lipschitz Continuity : Online Learning with Relative-Lipschitz Losses

**Y. Zhou\***, V. S. Portella\*, M. Schmidt, N. J. A. Harvey. *NeurIPS 2020* [[arXiv](#)]

- We extended the known regret bounds for classical online convex optimization algorithms to the relative Lipschitz setting.

### Replication of Machine-Learning Analyses to Predict Response to Antidepressant Medications in Patients with Major Depressive Disorder

J. Nunez, T. Nguyen, **Y. Zhou**, B. N. Frey, G. M. MacQueen, R. Milev, D. J. Müller, S. Rotzinger, J. A. Foster, S. H. Kennedy, G. Turecki, C. Bao, R. Ng, R. W. Lam.

*PLOS One* [[Link](#)]

- We re-implemented a previous study's predicative models on clinical effectiveness of certain antidepressants and externally validate their performance on a new dataset.

## WORK EXPERIENCE

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### Web Developer

*Qlik*

Jan 2016 – Apr 2016

Ottawa, ON, Canada

- Built a web app named Pythia to extract data from Google Analytics, New Relic, AWS EC2 and Elastic Search by making REST API calls and upload such data to Mongo Database.

### Software Developer

*NN Life Japan*

Sep 2016 – Dec 2016

Tokyo, Japan

- Designed and implemented a daily process in Windows PowerShell to fetch useful data and use them to make predictions on the number of expected telephone calls daily.

## TEACHING

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### Graduate Teaching Assistant

*The University of British Columbia*

Sep 2018 – Apr 2020

- CPSC 340 - Machine Learning and Data Mining
- CPSC 320 - Intermediate Algorithm Design and Analysis
- CPSC 420 - Advanced Algorithm Design and Analysis

## AWARDS

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### **Graduation Dean's Honours List**

2018

*University of Waterloo*

- Highest degree honour

### **Faculty of Mathematics Senate Scholarship**

2016 – 2018

*University of Waterloo*

### **University of Waterloo President's Scholarship**

2015

*University of Waterloo*

## SERVICES AND ACTIVITIES

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Student volunteer at NeurIPS 2019

Attendee at NeurIPS 2019, SODA 2020, FOCS 2020, NeurIPS 2020

Reviewer for NeurIPS 2022, ICML 2023, NeurIPS 2023, SODA 2024