

# ALEX KAZACHEK

✉ ALEXDKAZACHEK@GMAIL.COM  
🌐 WWW.AKAZACHEK.COM

## EDUCATION

### University of Western Ontario

2019 – 2023 (Projected)

HBSc in Mathematics & Data Science.

GPA of 3.90.

## AWARDS

### NSERC USRA

2021 Summer

### Cecil G. Gracey Scholarship

2021 Winter

### Borwein Memorial Prize

2020 Winter

### Dean's Honour Roll

2019 & 2020 School Years

### Western Scholarship of Excellence

2019 Fall

## SKILLS

### Programming

Analysing data with Python, specifically Turi Create & NumPy.

Implementing cryptographic protocols with Rust.

Creating static web sites using React.js.

### Design

Typesetting with  $\text{\LaTeX}$  and TikZ.

Recording and visualizing data with Jupyter notebooks and Matplotlib.

### Languages

Russian (conversational fluency).

Japanese (beginner).

## ACADEMICS

### Directed Reading Program

2020 Fall & Winter

Studied differential topology under a graduate student, primarily reading Guillemin & Pollack.

Presented on the role of transversal intersections of rays and hypersurfaces in the Jordan-Brouwer separation theorem.

## WORK EXPERIENCE

### University of Western Ontario | Research Assistant

2021 Summer (on-going)

Performing research project in mathematics, supervised by Dr. Tatyana Barron and funded by NSERC.

Broadly studying quantum information theory, looking for ways to identify entangled systems and their entropy inside certain complex manifolds.

### Stoney Creek YMCA | Membership Representative

February 2017 – March 2020

Co-led Accounts Receivable, corresponding with up to 100 members at once. Prior to 2019 merger, held branch at fewest arrears despite being largest in size.

Regularly achieved one of the highest monthly hourly sales.

### YMCA of Western Ontario | Camp Administrator

2018 Summer

Led Camp Accounts Receivable. Collected over \$8000 in arrears within two weeks, and worked out custom payment plans and subsidies through YMCA's Strong Kids charity.

Worked alongside the Children's Aid Society and City of London to process payments and subsidy applications.

## CLUBS & COMMITTEES

### Canadian Undergraduate Mathematics Conference | Committee Member

2021 Summer (on-going)

Created and now maintaining new website for this and forthcoming CUMCs. Implemented desktop and mobile support, and bilingual localization (English & French).

Organizing various academic and industry panels, and seeking out event sponsors.

2020 Summer

Decided on software solutions to rapidly move the conference online due to Covid-19. Hosted 112 students from 22 universities and 4 countries.

Arranged an industry panel of past mathematics undergraduates, including two senior employees at Lyft and a graduate student in financial engineering at Columbia University.

### Math Club at Western | VP Academics

2020 & 2021 School Years (on-going)

Launched biweekly mathematics contests for undergraduate students, and helping write and grade these contests.

Introduced student seminars, an opportunity for undergraduate students in mathematics or related disciplines to share their independent studies and projects.