ALEX KAZACHEK

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EDUCATION

2019 - Present | The University of Western Ontario ('UWO')

Honours Specialization in Mathematics, 2^{nd} year.

Projected concurrent Major in Data Science.

Current average of 89.12%.

AWARDS

2019	Dean's Honour Roll
School Year	Achieved an average of at least 80% with no failures, enrolled in at least 4.0 courses.
Fall 2019	Western Scholarship of Excellence
	Had a university admission average at or above 90%, but less than 95%.
Winter 2020	Borwein Memorial Prize
	Finished with the highest mark in Real Analysis I (Math 2122).

ACADEMICS

2017 - 2018	Advanced Placement ('AP') Credits
	Self-studied AP Calculus AB (2017), AP Statistics (2018), and AP Physics C: Mechanics (2018).
2018	Western's Initiative for Scholarly Excellence ('WISE')
School Year	One of the 100 admissions to the WISE program, enrolling in 1.0 courses at UWO concurrently with secondary school studies.
Fall 2019	William Lowell Putnam Mathematical Competition
	Scored 3/120, ranking 1831.5/3428.
Winter 2020	Directed Reading Program
	Studied manifolds and smooth maps, supervised by graduate student Udit Mavinkurve.
	Preliminary reading of excerpts from Spivak's Calculus on Manifolds, relating to differentiation and continuity in \mathbb{R}^n .
	Main reading of Guillemin and Pollack's DIFFERENTIAL TOPOLOGY, covering smooth maps, manifolds, submersions, and immersions.
Fall 2020	Directed Reading Program
	Studied the Jordan-Brouwer separation theorem, supervised by graduate student Prakash Singh.

Main reading of Guillemin and Pollack's DIFFERENTIAL TOPOLOGY, covering transversality, homotopy, manifolds with boundary, intersections, and winding numbers.

End-of-term presentation on ideas central to the proof of the separation theorem, involving

End-of-term presentation on ideas central to the proof of the separation theorem, involving transversal intersections of rays with hypersurfaces.

Clubs & Committees

2019 School Year

Math Club at Western ('MaCAW'), Pure Mathematics Secretary

Co-ran weekly problem solving sessions, teaching recreational mathematics to and solving contest problems with other undergraduate students.

2020 School Year (on-going)

Math Club at Western ('MaCAW'), VP Academics

Introduced biweekly mathematics contests available to all undergraduate students, and helping design and grade these contests.

Introduced student seminars, an opportunity for undergraduate students to share and discuss any independent mathematical works or passions.

Inviting professors and post-doctoral fellows to give "Pizza Seminars", talks for undergraduate students geared to teach and introduce mathematics not found in traditional coursework.

Summer 2020

Canadian Undergraduate Mathematics Conference ('CUMC'), Committee Member

Helped coordinate the conference, hosting 112 students from 22 universities and 4 countries.

Organized the industry panel, bringing in past mathematics undergraduates, including two senior employees at Lyft and a graduate student in financial engineering at Columbia University.

Contacted professors from universities in Canada and the United States, asked them to give keynote lectures for the conference, and then scheduled these lectures.

Assessed and organized the technical software needed to suddenly transition the conference online, because of the Covid-19 pandemic.

Created the closing ceremony slideshow and mailer.

Volunteer Experience

Dec 2015 -

Stoney Creek YMCA, Membership Sales and Services Volunteer

Feb 2017 Led prospective members on tours throughout the building, explaining amenities and services.

Completed "Sunshine Calls", checking in with new members to answer any questions or concerns.

Assisted staff, such as by answering phones or simple questions from members.

Summer 2019

Green Party of Canada, Student Volunteer

Participated in canvassing events for the 2019 Canadian election.

Summer 2020

SmartStart: Academics, Panelist

Represented MaCAW at the mathematics department meet-and-greet session.

Answered questions from incoming UWO students regarding the transition from secondary school

to university.

Fall 2020

Fall Preview Day, Student Ambassador

Represented the UWO mathematics department in the science faculty events.

Answered questions from prospective students regarding mathematics courses and modules.

Work Experience

Feb 2017 – Mar 2020

Stoney Creek YMCA, Membership Sales and Services Representative

Co-ran Accounts Receivable:

- · Responsible for maintaining regular phone and email correspondences with upwards of 100 members at a time.
- · Negotiated payment plans and amounts with members to maintain both customer relations and organization goals.
- · Prior to 2019 merger, consistently had fewest arrears despite being the largest branch.

Worked daily with customers of various ages, vulnerable persons, and newcomers to Canada.

Regularly achieved one of the highest monthly hourly sales numbers.

Summer 2018

YMCA of Western Ontario, Camp Administrator

Led Camp Accounts Receivable, and collected over \$8000 in arrears within two weeks.

Corresponded with various agencies, such as the Children's Aid Society and City of London, for invoicing, subsidy applications, and case-specific matters.

Assessed various financial documents and worked with families one-on-one to provide tailored payments plans through YMCA's Strong Kids charity.

SKILLS

Programming Coursework in **Python** and **Java**.

Courses covering data structures, analysis of algorithms, and cryptography.

Proficient in LATEX, typesetting both text-based and mathematics-based documents.

Knowledge of TikZ, creating plots and commutative diagrams, among other graphical figures.

Familiar with Qualtrics, creating detailed and highly-customizable surveys.

Conversational fluency in **Russian**.

Beginner knowledge of **Japanese**.