

JUNE 2024 · JULY 2024

SUMMER INTERNSHIP IN THE COGNITIVE SCIENCE OF DECISION MAKING

Decision, Inference, and Cognitive Economics (DICE) Lab
University of Waterloo



Description

UWATERLOO INTERNSHIP

The DICE Lab Summer Internship is a 2-month immersive research experience that occurs annually at the University of Waterloo during June and July. The program attracts undergraduates from across Canada to gain research experience and prepare for careers in cognitive and behavioural science. Interns gain first-hand experience first-hand by carrying out research projects at the cutting-edge of the decision sciences. We pride ourselves on involving interns in every aspect of the research project, from research design to manuscript preparation, and ensure that undergraduates are deeply intellectually engaged with our research.



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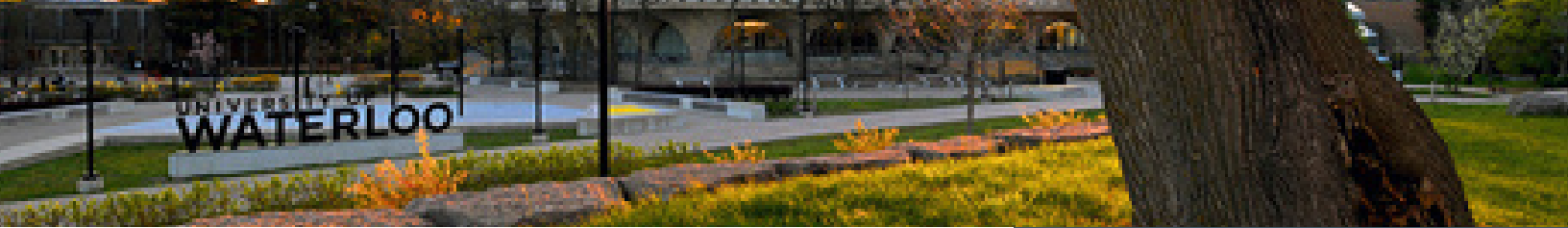
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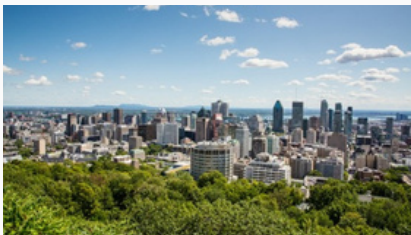
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1) What is the DICE Lab?

The Decision, Inference, and Cognitive Economics (DICE) Lab is a research group at the University of Waterloo Department of Psychology, directed by Dr. Sam Johnson. Our research spans all major topics in decision-making, behavioural economics, and high-level cognition. Current foci of work include decision-making under risk and over time, moral psychology, belief and attitude change, mental models of social and economic institutions, and how people prioritize tasks. We primarily use experiments, but past and future projects in the lab have relied on computational modeling, econometric analyses of big data, text mining, qualitative approaches, and computer simulation.



2) When does the internship run?

The 2024 internship dates are from Monday, June 3 to Wednesday, July 31. Interns have July 1-2 off for Canada Day (so that you can spend a four-day weekend somewhere more exciting, like Montreal, Toronto, or Ottawa).

Our mascot is Mozzi, the Irish Wolfhound, whose passion for cognitive science is outstripped only by his hatred of rodents.





3) What skills will I gain from this internship?

The internship is essentially a miniature version of graduate school. Our goal is for each intern to complete a project of the course of the 8-week program. Although each graduate student mentor has a particular research focus, we aim to co-develop projects jointly between the intern, the mentor, and Dr. Johnson to ensure we have an idea that everyone is excited about. Interns are involved in idea generation, experimental design, stimuli development, experiment programming, data analysis, and oral and written presentation. If an intern wants to gain a particular skill, we will do our best to find an opportunity to develop that skill if at all possible.

4) What is the internship experience like on a day-to-day basis?

Each intern is assigned a graduate student mentor and provided with workspace in our lab, which is just down the hall from grad students' and Dr. Johnson's offices. Our lab has a large conference table, desks spread across several rooms, a mini-kitchen, and a very comfortable couch. If our next grant goes through, we might invest in a lava lamp and/or disco ball.

Every day will be different because a research project involves so many disparate tasks. But on a typical day, you might start by attending a lab-wide presentation with all graduate students and interns, work independently on developing stimuli, meet with your graduate student mentor to discuss your stimuli, share lunch with your fellow interns, read a paper over a coffee and then discuss it with your mentor, and finally work on programming your study before data collection commences tomorrow.



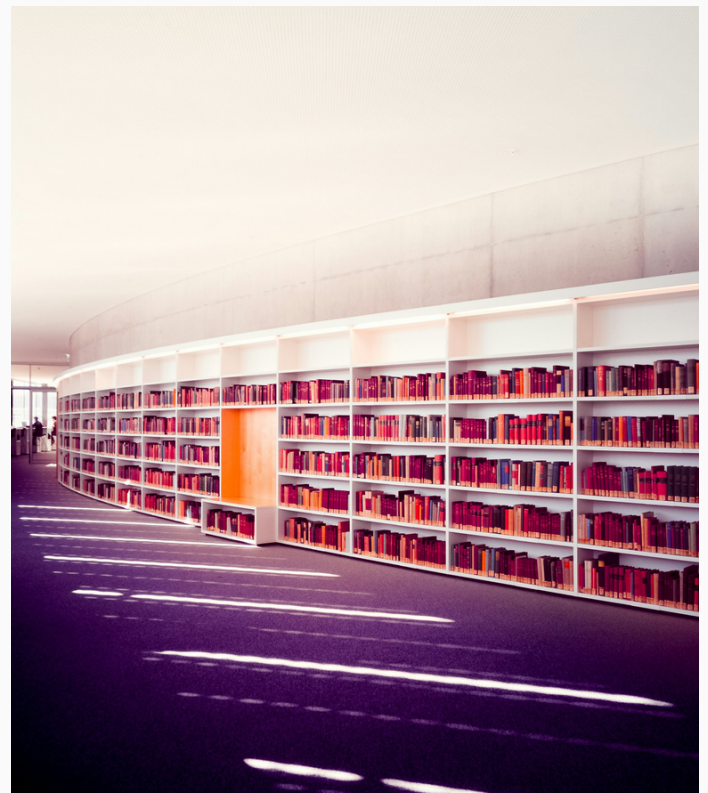
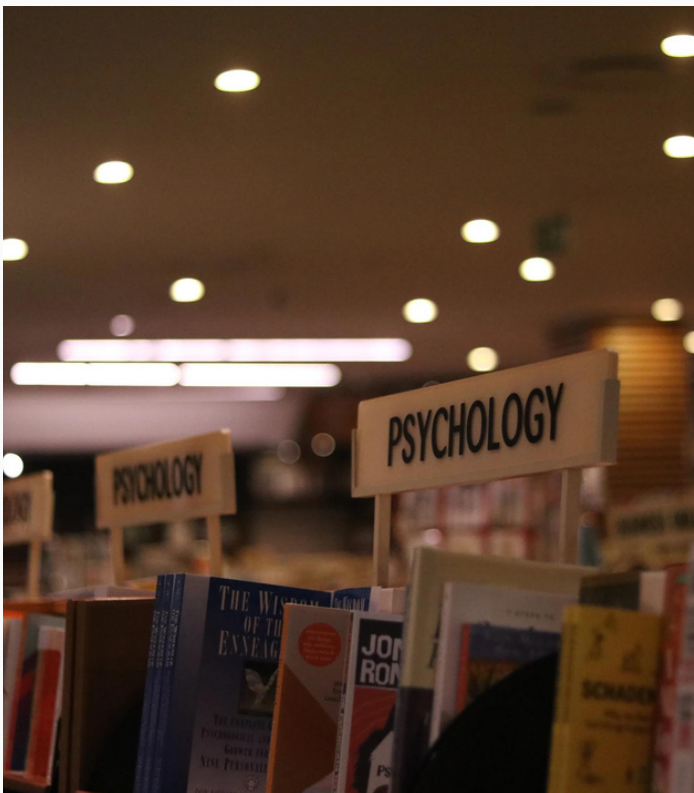


5) How will the internship help me to prepare for a career in cognitive or behavioural science?

Overall, this program is very well-suited as preparation for a MA or PhD in cognitive psychology, social psychology, or management.

To a large extent, you get out what you put in to an experience like this. But if you successfully navigate a project from start to finish under the careful guidance of our skilled mentors, these experiences are invaluable preparation for graduate school in any field of the behavioural or cognitive sciences. Our lab often includes undergraduate co-authors on publications, and while we cannot guarantee that your internship experience will lead to a publication (after all, science is hard and experiments don't always work out as we plan), we offer co-authorship when projects lead to publications. The internship is also an opportunity to expand your network beyond your own university, which looks impressive on a CV and can potentially lead to an additional letter of reference from an external source.

Finally, the internship is as close as you will get to a simulation of a Psychology MA/PhD program while you are an undergraduate (except, frankly, we're more fun to be around than most). If you enjoy the internship and thrive in our research environment, there's a good chance that grad school is a great fit for you. If you hate every second, then maybe not so much.





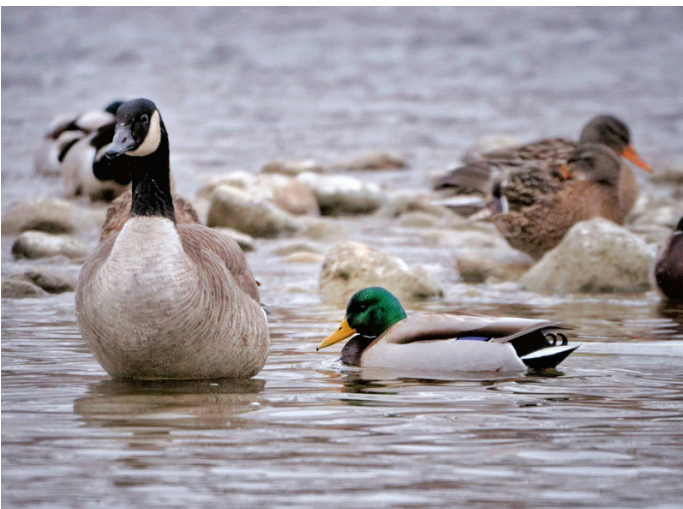
6) What structured training is involved beyond research mentorship?

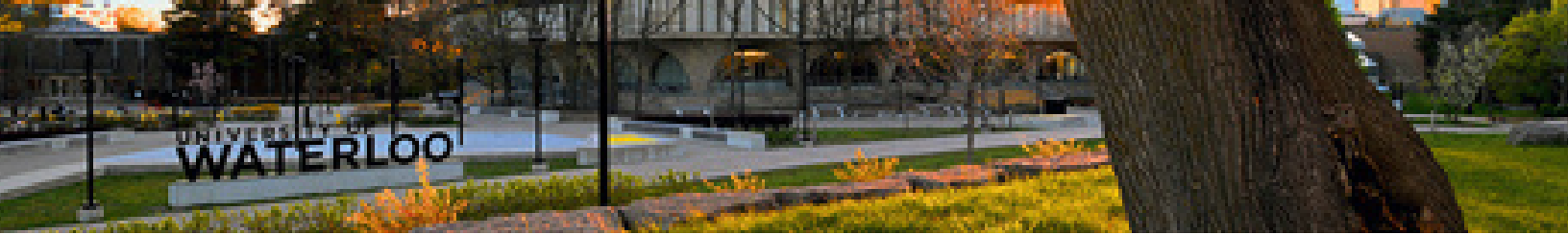
Although you will spend about 90% of your time working on research projects in collaboration with your mentor, we do offer periodic skill-building workshops, depending on the interests of interns and availability of instructors, such as training in Qualtrics, Excel, and R. In addition, Dr. Johnson will run a workshop on graduate school admissions and personal statement preparation. We also hold weekly lab meetings, which involve a combination of workshop presentation (mostly from interns) and “journal club”-style discussions of research articles. Finally, on the last day of the internship, each intern will give a capstone presentation of their work throughout the summer as an opportunity for further feedback and practice.

7) What is Waterloo like in the summer?

Waterloo is a medium-sized city and a college town at heart. It has many dozens of restaurants and cafes within walking distance of campus, a sprawling network of bike paths throughout and beyond the city, and many urban and suburban parks to explore. Our undergraduates tell us that night life exists here, and there are convenient buses and trains to Toronto. The campus is filled with geese and the weather is beautiful. (Note that we are not hosting a winter internship, as only humans are allowed in the building).

See right photo to see our only applicants for our Winter 2023 internship.





8) Who are the mentors?

This summer, four graduate students in the DICE Lab are accepting interns:

Dogukan Demirciogulu

Dogukan is a Ph.D. student in Cognitive Psychology. Recently, he has been exploring how people's intuitive theories of emotion and cognition impact their risky and intertemporal choices.

When Dogukan is not researching, he finds joy in swimming, running, and doing yoga.



Kristina Wu

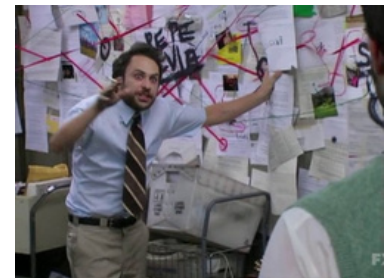
Hey, I'm Kristina! My work focuses on task prioritization strategies, examining the heuristics people use to select tasks from a larger task list. Beyond this, I am also interested in how people value their attention within the scope of the current attention economy.

In my free time, I enjoy running, crocheting, and live music!



Neil Wegenschimmel

Neil is currently studying manifestations of radicalism and extremism in society. He's interested in the untangling the connections between epistemological problems brought on by novel technology and its influence on social and political cognition, as well as the individual subject's view of themselves in a postmodern landscape. Beyond this he has a wide array of interests that cross philosophy, sociology, and history, though frequently he just feels like that guy in the conspiracy meme.



Jordan Sheen

Hello, I am Jordan, and I am currently working on AI chatbots that persuade people to think that legalizing kidney markets is a good thing. Other than persuasion, I am interested in JDM within the realms of economics, politics, and culture. I am also very interested in how people behave in economic games and why people engage in prosocial behaviour.





9) What does the lab do for fun?

Programming, reading, and writing. Oh, and of course thinking. What more does one need?!

Just kidding. We're work-hard, play-hard folks. Lab members enjoy a wide range of hobbies, such as running and biking, swimming, cooking, indoor climbing, and dodgeball. We often eat lunch together and periodically play board games as a lab. (So far, Dr. Johnson usually wins, but he accepts that he will one day be dethroned by a younger, quicker opponent.) We think it would be fun to do a Cognitive Science Movie Night during the summer.



10) Is this a paid opportunity?

With all the aforementioned fun, do you even want to be paid?

In all seriousness, the main benefit of this program is educational, in the form of vocational training and preparation for careers in behavioural or cognitive science. That said, we want to ensure that no one is excluded from the opportunity to participate based on their financial means. Therefore, we provide financial support to each student to defray living expenses. In 2024, this support totals \$4000 over the course of the summer.



11) Is housing provided?

Housing is not provided as a part of the program. However, affordable and convenient living quarters on the University of Waterloo campus are available. In 2024, monthly rates vary from \$562.50 (double-occupancy room with a roommate) to \$1200.00 (for a private one-bedroom suite). You are of course welcome to seek private accommodation nearby as well. Once our roster is finalized, all interns will be put in communication with one another to assist you in finding a roommate if desire.

[Link to summer accommodation website](#)





Can I apply if...?

12) I am an international student

Possibly. Canadian citizens and permanent residents, whether enrolled at a Canadian or foreign university, are eligible to apply. International students at Canadian universities are eligible to apply, subject to any restrictions on their visa (i.e., having the right to work at a different university in Canada). Unfortunately, we are unable to sponsor visas.



13) I'm a first-year student

Yes. We select interns not only based on their past experiences but based on their potential.

14) I've already completed my undergraduate degree but have not begun my graduate studies

Yes. As long as you have not yet been accepted to a graduate program, you are eligible.

15) I'm a student at the University of Waterloo

Yes. UW students will be given equal consideration as students from other universities.

16) Is it possible to do the internship remotely?

No. We believe that a face-to-face experience is essential both for gaining a maximally useful research experience and for creating a cohort with great camaraderie. This means you'll need to come to us in Waterloo.



17) How do I apply?

You can apply by completing [this webform](#). The application includes a brief personal statement (we recommend 200-250 words), a copy of your transcript, and contact details for two recommenders (you do not have to solicit letters of reference from them). Applications are due on [February 29, 2024](#). If you are a finalist for the internship, you will be contacted in mid-March for an interview. We aim to have final decisions by the end of March.



18) Who should I include as a reference?

If you have any prior research experience, then someone who knows you in a research context is your best bet. Otherwise, professors whose classes you did well in, particularly if they involved some written work like an essay, are often good references. We would discourage you from including professors who knew you only in a large class setting unless you had a substantial amount of personal interaction, as they usually cannot provide much information.

We understand that students at large universities, particularly first- and second-years, may not really know any professors well enough to ask for a reference. That's okay. You can ask a graduate student you worked with in a research context or a TA in a course. One (but not both) of your references could be from someone who knows you in a non-academic context (e.g., a current or former employer). If you are a first-year student, you could even ask one of your high school teachers. Just don't ask your parents.

Once again, you do not need to ask your references for a letter; we will contact them for a brief comment if you are a finalist. However, you should seek their permission to be listed in your application.

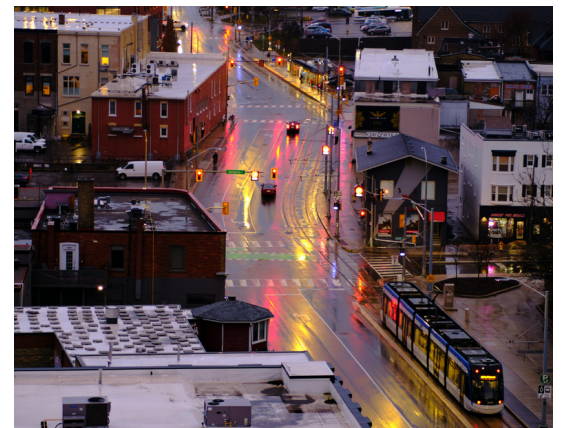


19) What would make the ideal applicant?

We keep an open mind as we evaluate applications—excellence and potential take many forms and there is no one ideal candidate. Research experience is an asset but is not required, and you do not need to be a Psychology major to be competitive. For example, background in economics, philosophy, or computer science are just as valuable to the work we do as background in cognitive psychology. Skills such as statistics, programming, or video editing are potentially useful too. Above all, we look for passion and creativity; everything else we can teach you.

On a pragmatic level, here are a few possible suggestions for writing a strong personal statement:

- Mention any relevant research experience and skills.
- Mention your career plans if they are relevant to what the lab does.
- If any of the research areas of our mentors seems especially interesting to you, consider mentioning one or two of them and explaining why it would be exciting to work on it.
- If you've read and enjoyed any of our publications, consider pitching a related idea. If we like it, that will make your application stand out.



20) Who do I contact if I have questions?

You can contact us by emailing dicelab@uwaterloo.ca.

