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**DATA SCIENCES
INSTITUTE**

Summer Undergraduate Data Sciences (SUDS) Research Opportunity

January 9, 2024

Land Acknowledgement

We wish to acknowledge this land on which the University of Toronto operates. For thousands of years it has been the traditional land of the Huron-Wendat, the Seneca, and the Mississaugas of the Credit. Today, this meeting place is still the home to many Indigenous people from across Turtle Island and we are grateful to have the opportunity to work on this land.



DSI SUDS Info Session Guideline

- Presentation slides and recordings will be shared
- Please remain muted.
- Ask questions in the Slido.
- This is a safe space. We require all participants to show respect to each other. Non-compliance will result in removal from the event.

Access Slido here (QR Code)



Or visit **slido.com** and join
with code **#4209331**






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TODAY'S Outline

-  What is the DSI?
-  Inspiration & Opportunities
Summer Research? Why DSI?
-  Application Steps and Process
Eligibility, requirement, reference, etc.
-  Application tips from PIs and
former SUDS Scholars
-  Q & A

Visit Slido.com and join with code
4209331 to leave your
questions

About Us



A research and training hub for
data science activity at the
University of Toronto.

Mission: To accelerate the impact of data
sciences across disciplines to address
pressing societal questions and drive
positive social change



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DSI SUDS Research Program



Undergraduate students interested in data science have an exciting opportunity to:

- Engage in hands-on research and valuable experience to help you apply to graduate or professional schools
- Develop more advanced skills
 - Present your research
- Meet DSI researchers and students from a range of disciplines
- Engage in social, academic, and professional development opportunities



Faculty members and principal investigators with summer research opportunities focused on **data sciences methodology or applications in any research area**. Projects can include any aspect of basic, applied, or clinical research. DSI provides \$7,200 for 12-weeks during May-mid-August 2024. (Supervisors can top up)

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Scan to read their stories:
**SUDS Scholars Showcase
their Newly Acquired Data
Science Skills**



**In Summer 2023,
We welcomed 35 SUDS Scholars from across University of Toronto and Canadian universities**



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**Apply to Be a DSI
SUDS Scholar!**
DSI will support and
fund up to 25 students
for 2024.

Student eligibility:

- ☐ Registered as a full-time student in a bachelor's degree or professional undergraduate degree program at a Canadian university/college (at the time of application)
- ☐ Canadian citizen, permanent resident of Canada, or foreign student with valid student visa for the full summer.
- ☐ We do not have a required minimum GPA for the SUDS program; however, we recommend minimum GPA of 3.3/4.0 for applicants as the program is competitive.
- ☐ DSI is strongly committed to diversity within its community and especially welcomes applications from racialized persons / persons of colour, women, Indigenous / Aboriginal People of North America, persons with disabilities, LGBTQ2S+ persons, and others who may contribute to the further diversification of ideas.

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How will it work?

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questions

- 1 Supervisors who have one or more position available for a summer student submit their research opportunity. Supervisors list specific skills they are looking for the SUDS student.
- 2 DSI reviews the proposed opportunities. The approved list of research opportunity descriptions and supervisors are posted on the DSI website. Interested students apply and rank their top 3 choices.
- 3 The DSI office reviews the student applications for completeness, eligibility, matching of skill set, and forwards student applications to the supervisor for selection and approval.
- 4 Students engage in their data science research and, in addition, the full SUDS student cohort across all research areas are provided with data sciences networking, academic and professional development opportunities.



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What to expect during your summer position as a DSI SUDS Scholar?

- The funding is meant to support the project from May to mid-August. Time commitment to the SUDS program is full-time equivalent.
 - Start dates and terms of work are flexible and should be decided between you and your supervisor
- In person, virtual and hybrid positions are available depending on the research, project, and preferences of you and your supervisor
- In addition to your research during the weeks, you'll have the opportunity to attend data science skills and professional development workshops – you must attend at least 75% of the sessions to complete your SUDS program

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questions

Summer Undergraduate Data Sciences Research Experience @ DSI

Providing opportunities for a
research experience and
data sciences approaches to
research in various fields



Scan to view the 2023 DSI
SUDS Cohort Activities

- Research opportunities
- Data Science Bootcamp: Practical skills in Unix Shell, Python, R, SQL, advanced topics, etc.
- Professional Development: Creating poster, visualizations, networking, methodologies
- Data Science @ Work Series: Data Science in real world practices, case studies, etc.
- SUDS Scholars presenting your research projects at the SUDS Showcase
- And more



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Research Opportunities

Image:
Anthony McCanny: *The Data Science of a Satisfying, Purposeful, and Engaging life*
Supervisor: Prof. Felix Cheung, Psychology, Faculty of Arts & Science, UofT



Scan to view the 2024 DSI
SUDS Opportunities

SUDS research opportunities are focused on data sciences methodology applications in any research area.

Research opportunities can include any aspect of basic, applied, or clinical research.

There are a wide range of proposals in various disciplines:

- ☐ Life Sciences
- ☐ Physical Sciences
- ☐ Social Sciences
- ☐ Humanities



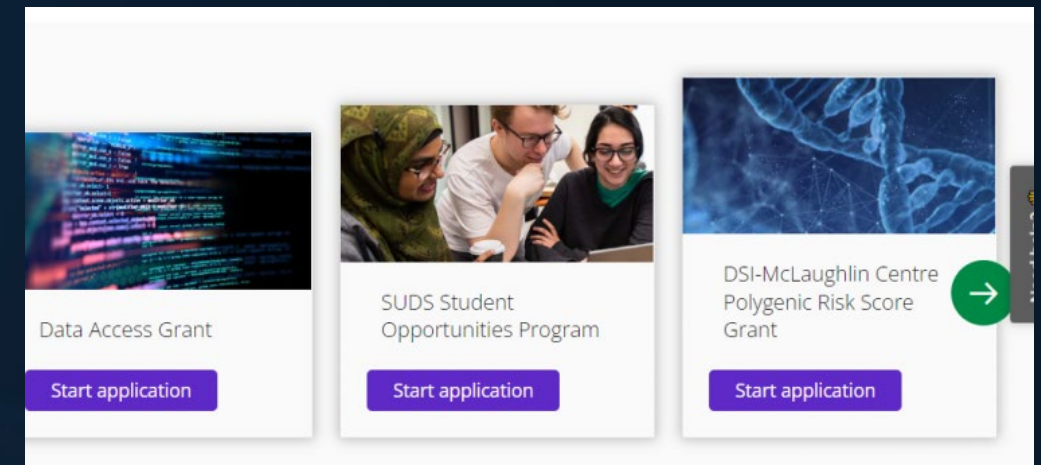
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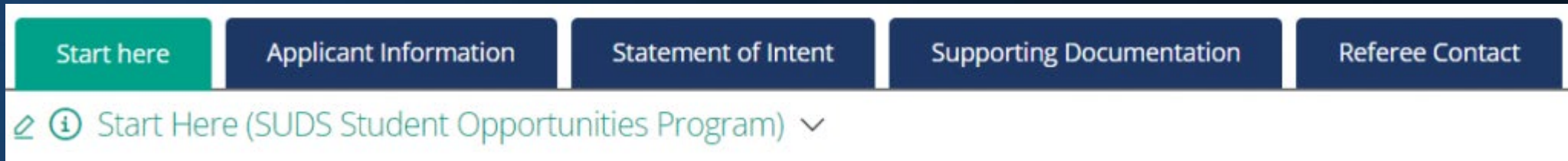
Application Process

- Student applications for SUDS opportunities are submitted via the [DSI Good Grants application portal](#).
 - Click on the link above or scan the QR code
- Register an account and select “Start Application” for “SUDS Student”



Application Process

- The application is divided into tabs; each tab includes a set of instructions and fields to fill out. These instructions are also highlighted below.



Application Process: Tab 1 – Start Here

- Competition
 - SUDS Student Opportunities Program
- Application name
 - Your name – will be auto filled
- Go to “Save + next”

The screenshot shows the 'Start here' tab of the application process. At the top, there are four tabs: 'Start here' (active), 'Applicant Information', 'Statement of Intent', and 'Support'. Below the tabs, there is a heading 'Start Here (SUDS Student Opportunities Program)' with a dropdown arrow. The main text area contains instructions: 'You are starting an application for the Data Sciences Institute SUDS Student Opportunities Program. The deadline for the Letter of Reference and your Demographic Survey is February 2, 2024. Please click "Save + next" to start. Saving this tab starts an application file associated with your account. Once your file is saved, you will not be able to submit your application until all required information is provided. You will receive an automatic confirmation to your email when you submit your application. For any inquiries, please email SUDS.dsi@utoronto.ca.' Below this text, there is a 'Competition' section with a dropdown menu set to 'SUDS Student Opportunities Program'. A link 'Download blank application PDF for reference' is provided. The 'Application name' section has a text box containing 'Wenzhe Xu'. At the bottom, there are three buttons: 'Save + next' (highlighted in purple), 'Save + close', and 'Preview'.

Start here Applicant Information Statement of Intent Support

Start Here (SUDS Student Opportunities Program) ▾

You are starting an application for the Data Sciences Institute [SUDS Student Opportunities Program](#). The deadline for the Letter of Reference and your Demographic Survey is February 2, 2024.

Please click "Save + next" to start. Saving this tab starts an application file associated with your account. Once your file is saved, you will not be able to submit your application until all required information is provided. You will receive an automatic confirmation to your email when you submit your application. For any inquiries, please email SUDS.dsi@utoronto.ca.

Competition

SUDS Student Opportunities Program ▾

[Download blank application PDF for reference](#)

Application name

Wenzhe Xu

Save + next Save + close Preview



Application Process:

Tab 2 – Applicant Information

- Personal information
- Go to “Save + next”



Tab 3 – Statement of Intent

- Student Statement (maximum 200 words): summarize your suitability for the SUDS program and your training goals.
 - Please describe why you would be an ideal candidate for SUDS.
- Go to “Save + next”

The screenshot displays the 'Statement of Intent' tab within the SUDS application. At the top, there are four navigation buttons: 'Start here', 'Applicant Information', 'Statement of Intent' (which is highlighted in green), and 'Supporting Documentation'. Below these buttons, the text 'Statement of Intent (SUDS Student Opportunities Program)' is shown with a dropdown arrow. The main heading is 'Instructions', followed by the instruction 'Please enter your statement of intent on this tab.' Below this is a text input area titled 'Statement of Intent' with a word count of '0 / 200 words'. The input area includes a rich text editor toolbar with icons for bold (B), italic (I), heading (H), quote, list, link, unlink, image, and help. To the right of the input area, there is a section titled 'Please describe why' and a 'Notes' section with a bullet point '• Submission text'.



Tab 4 – Supporting Documentation

- Upload your resume or CV in PDF format.
- Upload your unofficial transcript(s) for initial review. If you have multiple transcripts, please save them in a single PDF file.
- Make sure you will be arranging the official transcript(s) for your SUDS application.
- Go to “Save + next”

The screenshot shows the 'Supporting Documentation' tab of the SUDS Student Opportunities Program application. The interface includes a navigation bar with tabs: 'Start here', 'Applicant Information', 'Statement of Intent', 'Supporting Documentation' (active), and 'Refer'. Below the navigation bar, there is a section titled 'Supporting Documentation (SUDS Student Opportunities Program)' with a dropdown arrow. Under this, there are 'Instructions' and a note about accepting unofficial transcripts for initial review, with a link to SUDS.dsi@utoronto.ca. The main content area has two upload sections: 'Resume / CV Upload' and 'Unofficial Transcript'. The 'Resume / CV Upload' section shows a 'Replace' link, a PDF icon, and a download link for 'Course Descriptions ... (185.92 kB download)'. The 'Unofficial Transcript' section also shows a 'Replace' link.



Tab 5 – Referee Contact

- Contact information for an academic reference who will fill out the form.
- We recommend that you notify your referee in advance of submitting your application, ensuring you can submit their email address as part of your application.

[Start here](#) [Applicant Information](#) [Statement of Intent](#) [Supporting Documentation](#) [Referee Contact](#)

[🔗 ⓘ Referee Information \(SUDS Student Opportunities Program\) ▾](#)

Instructions

Please enter your referee's information on this tab.

When this application form is submitted, either on or before the deadline, your referee will be notified and asked to submit their contributions to your application. Your referee will be able to see identifying portions of your application; their submissions will remain invisible to you.

We strongly recommend that you contact your referee before you supply their information, confirm that they are available to submit a reference, and provide their institutional/organization email address that they wish you to use. References submitted through dossier services such as Interfolio are not accepted. You will be asked to create a Good Grants account.

Referee Name ⓘ

Please provide the full name for your referee.

Referee Email ⓘ

Please provide your referee's institutional email address. The email provided must be used by your reference to register for Good Grants. You may want to check (a) if your referee has a Good Grants account and/or (b) has a preferred email for registration.

Referee Organization ⓘ

Please provide the organization for your referee.

Tab 6 – Demographic Information

- Fill in your demographic information.
- You have the option to select 'Prefer not to answer' for all questions.
- Click Save + next to submit.

Demographic Information (SUDS Student Opportunities Program) ▾

Instructions

Purpose: The following short survey is required for all DSI applicants for each proposal that they submit. Providing this demographic data allows the Data Sciences Institute to ensure that our competitions take Equity, Diversity, and Inclusion (EDI) into account when surveying our applicant pool and advising review panels on adjudication and funding decisions. While the completion of the survey is a required component of the application, individual applicants have the option of answering "Prefer not to answer" for each of the questions.

Use: The Data Sciences Institute at the University of Toronto respects your privacy. The information collected by this Demographic Survey will only be used internally by DSI staff. Your data will be stored securely and kept confidential and will not be used to evaluate you as an individual or as part of a team; any specific applicant or team info will not be made available to review committee members. Instead, this data will be provided to an Equity Officer who will advise the committee on whether or not committee decisions reflect the DSI's commitment to supporting a data sciences ecosystem at the University of Toronto that includes Indigenous Persons, Racialized Persons, Persons with Disabilities, Women, and members of the 2SLGBTQ+ community. In aggregate, it may also be used to inform DSI recruitment strategies moving forward. For more information, please contact us at suds.dsi@utoronto.ca.

Do you identify as an Indigenous person from Turtle Island/North America? For example, First Nations (status or non-status), Inuk (Inuit), Métis, Alaska Native, Native American, Native Hawaiian, or Native Mexican?



- ☐ Yes
☐ No
☐ Prefer not to answer

Please select "Yes" if you identify as an Indigenous person from Turtle Island/North America. Please select "No" if not. Please select "Prefer not to answer" if you prefer not to answer.

Need help?



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Ranking the Opportunities

List of Projects *

Please select your top three preferences from the list below. Drag your three selections from the full list into the second column in order of preference.

Drag items from the left-hand list into the right-hand list to order them.

A Climate Downscaling Workflow
for Engineering and Climate
Impacts Analysis: UTCDW



A Comparison of Missing Data
Methods for Clinical Trials



A website for large-scale data
collection on social, moral, and
political attitudes



Abnormal brain cell activity in a
mouse model of Alzheimer's
disease



Advanced data processing of
Ontario Laboratory Information
System



Algorithmic (Un)Fairness in



After Submission

Once you have submitted your application on or before January 25, the following things occur:

1. **Rank the Opportunities**: You will receive a confirmation email that includes a link to rank your top 3 SUDS research opportunity choices.
2. **Reference form**: The Referee indicated on the tab “Referee Contact” will receive an email requesting that they log into Good Grants to fill out the reference form.



Advice from a DSI SUDS Supervisor: Application Materials

- Communicate your skill sets in your application materials based on your understanding of the “research opportunity description” and “skills required” sections



Important Dates

- The deadline for student applications is January 25, 2024.
- The deadline for the Reference Form is February 1, 2024, 23:59 ET.
- Students will be notified in early March.



Additional FAQs, Advice and Resources



Frequently Asked Questions

I am an international student studying in Canada. Can I apply for SUDS?

Yes. International students are eligible for the SUDS program; however, you must be studying in a Canadian university with a valid study permit throughout the summer.

I am a second entry PharmD in my first year. Can I apply for SUDS?

Yes. Undergraduate second entry students – e.g., law, medicine, nursing; are eligible for the DSI SUDS Program.

I am not majoring in data science /statistics, can I apply for SUDS?

Yes. There is no program requirement as a prerequisite to the SUDS program. However, you should have the skills that are required for the opportunity.

What makes a strong candidate?

Emphasize your experience and/or skills you have can contribute to the project(s). Demonstrate academic and/or research excellence and high potential for success in their chosen fields.

Should applicants already have strong background in data science, or will strong computational skills and research potential suffice?

This depends on the proposed project and research environment. The data science skills of the applicant should align well with the proposed project.



Frequently Asked Questions

I am a visiting student, can I apply?

Depends. If you are a visiting student from other countries, you will not be eligible since your degree is not with a Canadian university. If you are a student with a Canadian university, but visiting other universities, you can apply for SUDS.

I am in my last semester of my undergraduate degree, can I apply?

Yes. At the time of application, you can be in your first year, or last year in your bachelor's degree – you can be at all stages and experience levels as an undergraduate student

I am a graduate student with a completed undergraduate degree, can I apply for SUDS?

No. However, the DSI has other opportunities and grants, such as doctoral and postdoctoral fellowship. Scan to view other funding programs:



How many reference do I need? Who can be my referee?

The SUDS application requires one academic reference. It can be your course professor, lab PI, or research supervisor.

Does attending the SUDS program cost any fees?

No. Instead, \$7,200 CAD at minimum provided by the Data Sciences Institute to the supervisor for the student. Any supplement above this level may be set at the supervisor's or department's discretion.



Frequently Asked Questions

What areas of research are available for SUDS?

Research are from any area—social sciences, humanities, life and physical sciences. Research can include any aspect of basic, applied, or clinical research.

Scan to view:



Do you have examples of previous SUDS research?

Scan to read their stories: A summer of learning, fun and community for 2022 DSI SUDS Scholars



Please define what data sciences encompasses.

With increasingly larger and more complex data comes the challenge of **collecting, manipulating, storing, visualizing and extracting information from the data, in reproducible, fair and ethical ways.** (See DSI website)

I currently hold another summer opportunity. Can I apply for SUDS?

As the setting of the SUDS program is a full-time commitment, successful student applicants cannot accept more than one summer studentship regardless of the funding source.

Is the workshop (cohort programs) part of the commitment?

Yes. To complete the SUDS program, all selected summer students must attend a minimum of 75% of the weekly seminars and will be invited to present at the SUDS Showcase Day.



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Advice from a Past DSI SUDS Scholar: How did I choose my opportunity?



Lauren Gill, former SUDS Scholar

Project: *Data Science for White Shark Conservation*

Best Presentation Awarded in SUDS
Research Day



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More Advice from DSI Trainees

"Unleash your curiosity and spark conversations with your supervisor and fellow SUDS scholars. You will benefit incredibly from the cohort programming. I've learned and enjoyed so much about the professional and human sides of academia."

- Ruisi Rachael Li,
former SUDS Scholar

"Relevant past experience can be important but it does not limit yourself from exploring new fields! When applying for a project in the area that's new to you, highlighting genuine interest and/or any transferable skills from past may be helpful!"

- Grace Yu, former SUDS
Scholar


"I found that the skill building workshops (intro to R, python, Bash) were extremely helpful and I recommend committing to these as much as possible!"


"There is no need to pretend that you know everything! Asking for help from my supervisor was a valuable learning experience plus helped the project move along faster."


- Lauren Gill, former SUDS
Scholar, Best
Presentation Awarded



THANK YOU

 Send us your questions
SUDS.dsi@utoronto.ca

 Sign up for news
<https://datasciences.utoronto.ca/maillinglist/>

 Follow us @UofTDSI



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Q&A and Feedback

