

Isabelle Laing

CONTACT

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EDUCATION

University of Toronto | Expected Graduation in June 2027

Honours Bachelor of Science at the University of Toronto

- Astronomy & Physics Specialist
 - Mathematics Minor
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AWARDS

Data Science & AI Talent Showcase Poster Award, University of Toronto, 2026

Samuel Beatty Fund Travel Award, Physics Department University of Toronto, 2026

Arts and Science Student Union Conference Travel Grant, University of Toronto, 2026

SURP Poster Award, University of Toronto, 2025

University of Toronto Admissions Scholarship, 2023

RESEARCH EXPERIENCE

SURF – Summer Undergraduate Research Program | May 2026 – Present

Canadian Institute for Theoretical Astrophysics (CITA), University of Toronto

- Supervised by Dr. Rohan Dahale, Dr. Aviad Levis and Dr. Bart Ripperda
- Statistical Signatures in Polarimetric Light Curves from Black Hole Accretion
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AST430 – Student Research Course | September 2025 – April 2026

David A. Dunlap Department of Astronomy & Astrophysics, University of Toronto

- Supervised by Dr. Renée Hložek, on the Hnauts research team
- Aiming to **generate a full pipeline** for stream simulation and investigate how different **dark matter models** will affect the streams themselves.

AST430 – Student Research Course | May 2025 – September 2025

David A. Dunlap Department of Astronomy & Astrophysics, University of Toronto

- Continued SURP project reporting to Dr. Josh Speagle and Dr. Ting Li.
- **Released a catalogue** containing predictions of stellar parameters and chemical abundances for over 12 million stars in the Milky Way.

Student Research Internship | May 2025 – August 2025

Sydney Institute for Astrophysics, University of Sydney

- Supervised by Dr. Joss Bland-Hawthorn and Dr. Thorsten Tepper-Garcia.
- **Identified and analysed clumps** in galactic simulations for the Galacticos Group.

Student Research Internship | September 2024 – April 2025

Department of Statistical Sciences, University of Toronto

- Continued SURP project reporting to Dr. Josh Speagle.
- Finalised the **machine learning pipeline** that would create the final catalogue.

SURP – Summer Undergraduate Research Program | May 2024 – August 2024

David A. Dunlap Department of Astronomy & Astrophysics, University of Toronto

- Supervised by Dr. Josh Speagle and Dr. Ting Li
- Used **machine learning** to derive stellar parameters and chemical abundances from spectra.
- Focus on **galactic archaeology**, tracing the assembly history of the Milky Way halo through its surviving stars.

PRESENTATIONS

- **Presentation**, *University of Toronto Physics Union Undergraduate Research Conference*, March 2026
 - **Presentation**, *Canadian Conference for Undergraduate Women & Gender Minorities in Physics*, January 2026
 - **Poster**, *Women in Science and Engineering Conference*, January 2026
 - **Poster**, *Data Sciences Institute Talent Showcase*, January 2026
 - **Poster**, *Vector Foundation Models for Science Workshop*, November 2025
 - **Flash Talk Speaker**, *AstroTours*, October 2025
 - **Poster**, *University of Toronto Summer Undergraduate Research Program (SURP) Poster Fair*, August 2024 and August 2025
 - **Poster**, *University of Toronto Research Opportunity Program (ROP) Poster Fair*, April 2025
 - **Presentation**, *DESI Workshop hosted by Dr. Ting Li*, August 2024
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PROFESSIONAL SKILLS

Languages

Native Speaker in French and English, B1 Spanish

Technical Skills

Python: specialised in machine learning applications, astrostatistics, and astrophysical data.

Computational Astrophysics (CTA200, University of Toronto): received a final grade of 99%.

Leadership

Research Team Leader, ROP (ENV299) at the University of Toronto (2024 - 2025)

Science Communication

Volunteer at Questacon - National Science and Technology Centre

Canberra, Australia (2022 - 2023)

Tutor

Freelance (2021 - 2023):

- Provided tutoring in Mathematics and Physics, in both French and English.
- Tutor Doctor ACT (Australian Capital Territory) (2021 - 2023):
- Provided tutoring for French, English, Mathematics and Physics.
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OUTREACH

Astronomy Union Executive Member (University of Toronto)

- President (2026/27 Academic Year)
- VP External Affairs (2025/26 Academic Year)
- Second Year Representative (2024/25 Academic Year)

Volunteer, ASTROTOURS (University of Toronto, 2024 - Present)

Volunteer, Astro On Tap (University of Toronto, 2024 - Present)

Volunteer, Girls in STEM Workshop Event (University of Toronto, May 2024)

Member of Corporate Relations Team, Charitable Indulgence (University of Toronto, 2023/24 academic year)