Job Posting:173825 - Position: W26 Co-op Student Research Assistant, AI for Astronomical Data Centres 173825

Co-op Work Term Posted:	2026 - Winter
App Deadline	10/06/2025 09:00 PM
Application Method:	Through Employer Website
Posting Goes Live:	09/24/2025 03:16 PM
Job Posting Status:	Approved

ORGANIZATION INFORMATION

Organization	NRC - National Research Council of Canada
Address Line 1	5071 West Saanich Rd
City	Victoria
Postal Code / Zip Code	V9E 2E7
Province / State	BC
Country	Canada

JOB POSTING INFORMATION

Placement Term	2026 - Winter
<b> Job Title <b>	W26 Co-op Student Research Assistant, AI for Astronomical Data Centres 173825
Position Type	Co-op Position
Job Location	Victoria, BC
Country	Canada
Duration	4 months
Salary Currency	CAD
Salary	833.0 per week for 37.5 Major List
Salary Range $	From $833 to $1107 per week (37.5 hrs)

Job Description

Job Title: Career Opportunities: Co-op Student Research Assistant, AI for Astronomical Data Centres (24452)
Job ID: 24452
Closing Date: Monday, October 6, 2025 - 23:59 Eastern Time
Priority may be given to the following designated employment equity groups: women, Indigenous peoples* (First Nations, Inuit and Métis), persons with disabilities and racialized persons*.
* The *Employment Equity Act*, which is under review, uses the terminology Aboriginal peoples and visible minorities.
Candidates are asked to self-declare when applying to this hiring process.
City: Victoria
Organizational Unit: Herzberg Astronomy and Astrophysics
Discover the possible
Anything is possible at the National Research Council (NRC), recently named one of Canada's 2025 Top Employers for Young People, a 2025 Top Employer in the National Capital Region and Forbes Canada's Best Employers!
As Canada's leading research and technology organization, our world-renowned research pushes the boundaries of science and engineering to make the impossible, possible. Every day we explore new ideas through innovative research and help companies discover possibilities that impact Canada's future and the world.
At the NRC, you'll also discover new possibilities. Our supportive workplace fosters a culture of creativity, welcoming fresh

perspectives and innovation at all levels. We value teamwork. You'll collaborate across multiple fields and with the brightest minds to find creative solutions. Most importantly, you'll discover what's possible within you as you grow, make valuable contributions and progress in your professional journey. From ground-breaking discoveries to a life-changing career, discover your possible at the NRC.

Project Description

We are developing a content-based search system in the Canadian Astronomy Data Centre (CADC) that will enable users to search astronomical images not only by metadata but also by image content. Our AI deep learning models, currently being tested on Hubble Space Telescope (HST) data, will enable users to select and download scientific images based on their content (e.g., spiral or elliptical galaxies) or filter out images affected by artifacts or poor quality (e.g., cosmic rays). To make these models practical tools, CADC is seeking a student to contribute to their integration into the data centre. The initial focus will be deployment in the HST collection, with future extensions to other archives such as the James Webb Space Telescope (JWST). The student will work on understanding model functionality, supporting the implementation of models into CADC systems, and conducting experiments related to AI-driven content-based search and CAOM (Common Archive Observation Model) applications.

Length of term

This is a **«16 week»** term.

Anticipated dates: starting 5 January 2026, ending 24 April 2026.

Responsibilities

- Assist with the integration of AI/deep learning models into CADC systems.
- Conduct experiments to evaluate and improve content-based search methods.
- Work with image datasets (e.g., HST) and identify opportunities for quality control and categorization.
- Contribute to the implementation of pipelines for deployment in the CADC environment.
- Document processes and outcomes to support future extensions to additional archives (e.g., JWST).

Compensation

- From $833 to $1107 per week (37.5 hrs)
- Salaries are determined based on the student's work term.

Notes

- In 2025, the NRC has been chosen as one of Canada's Top Employers for Young People, the National Capital Region's Top Employers and Forbes Canada's Best Employers.
- The incumbent must adhere to safe workplace practices at all times.
- A driver's license and car would be useful for personal transportation. Please note that the Dominion Astrophysical Observatory (DAO) is located approximately 15 kilometres from the downtown Victoria. The public transport to the area is not always convenient, but carpooling with observatory staff may be available. A lot of staff also commute by bicycle.

We thank all students for showing interest in working at NRC HAA, however, only selected candidates will be contacted.

Job Requirements

Education

Preferred Education level:

- University Undergraduate, preference 3rd or 4th year in Computer Science, Physics, Astronomy, or a related discipline.

Requirements

- Proficiency in Python.
- Familiarity with machine learning frameworks (TensorFlow, PyTorch, or similar).
- Understanding of image analysis or computer vision concepts.
- Ability to work with large datasets and scientific file formats.
- Strong analytical and problem-solving skills, with attention to detail.
- **Assets (preferred but not required):**
- Familiarity with database concepts: table creation and querying with ADQL or SQL
- Knowledge of astronomical data archives or CADC services.
- Experience with high-performance computing or cloud platforms.
- Familiarity with version control systems (e.g., Git).

Who can apply?

You are eligible for the NRC Co-op Program if:

- You attend a Canadian university/college with a recognized co-op program.
- You possess a minimum "B" academic average or equivalent (preference may be given to candidates with a "B+" academic average).

•You are a Canadian Citizen or Permanent Resident of Canada. Additionally, foreign national students who meet the eligibility requirements, are studying in recognized and eligible Canadian educational institution and possess a valid Co-op Work Permit may also apply. For more detailed requirements and information on this possibility, please refer to the information found at Citizenship and Immigration Canada.

Condition of employment

Reliability Status

For a Reliability Status, verification of background information over a period of 5 years is required.

Citizenship Requirement N/A

APPLICATION INFORMATION

Application Procedure Through Employer Website

Cover Letter Required? Yes

Address Cover Letter to Hiring Manager

Special Application Instructions

Application Link:

https://career17.sapsf.com/sfcareer/jobreqcareerpvt?jobId=24452&company=nationalreP&st=07CA71921DA750D068C172CE05B680495B5758DE

Application Requirements

In order to be considered for the Co-Op program please include the following in your application. Failure to do so will result in your application being excluded from searches.

• Cover Letter

•Resume

•Transcript

We will accept the most recent university/ college transcript available. Please ensure that your full name is clearly indicated on your transcript.

Closing Date: Monday, October 6, 2025 - 23:59 Eastern Time

Please click the "I intend to apply to this position" button on SCOPE and also submit your application via the employer's website. Applications are accepted on a rolling basis and the posting may be expired at any time by the employer as submissions are received. Students should submit their applications as soon as they are ready.