



SPACE APPS IN CANADA 2023

PARTICIPANT GUIDE

Last updated: 2023-10-04



Agenda

- What It's About
- Before the weekend
- During the weekend
- After the weekend
- Q&A
- Resources



WHAT IT'S ABOUT



spaceappschallenge.org

www.asc-csa.gc.ca/eng/events/2022/space-apps-challenge.asp

What It's About – History & Purpose



Began: **2012**

Total Engaged: **180k** people from **181** countries

Goals:

- **Inspire** collaboration, creativity, and critical thinking
- Foster **interest** in Earth and space science and exploration
- Raise **awareness** of NASA and space agency partners' data around the world
- Encourage **growth and diversity** of the next generation of scientists, technologists, designers, engineers, and artists

What It's About - Space Apps, eh !



Canadian Space Agency (CSA)

- Primary federal organization supporting Space Apps in Canada
- Offers its own challenges and prizes
- Offers mentors and support from scientists, engineers, and astronauts!

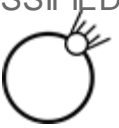
Canadian Space Society (CSS)

- Lead organizer for this year's event
- Founded as a non-profit organization and charity in 1983
- Objective is to sponsor and promote the involvement of Canadians in the space sector

Canada Coast to Coast

Hundreds of Canadians just like you have participated over the years! Here's this year's list of participating Canadian cities.

- Calgary
- Edmonton
- Halifax
- Hamilton
- Inuvik
- Montreal
- Mississauga (youth event)
- Ottawa
- Oshawa
- Toronto
- Timmins
- Windsor



What It's About - Last Year

Hybrid delivery (virtual and in-person):

- **11 Space Agencies**
- Combined for **31 Challenges**
- 28,286 + Registered Participants
- 4,534+ Teams
- 323 Local Events
- Universal Event in 162 Countries/Territories
- **2,814 Project Submissions**



What It's About - This Year

For the 12th anniversary of Space Apps Hackathon even more Space Agencies are combining forces! This year's theme is **Explore Open Science Together**

- **NASA**
- **Canadian Space Agency**
- Australian Space Agency
- Mexican Space Agency
- Indian Space Research Organization
- Brazilian Space Agency
- European Space Agency
- Japan Aerospace Exploration Agency
- National Space Activities Commission of Argentina
- National Space Science Agency of Bahrain
- Paraguayan Space Agency
- South African National Space Agency
- Italian Space Agency
- Turkish Space Agency



Hackathon Timeline



TO 6 OCT 2023

BEFORE THE WEEKEND

Get inspired, get ready, form a team, pick a challenge

6 OCT 2023

FRIDAY VIRTUAL KICKOFF

If you haven't done so form a team and pick a challenge

7-8 OCT 2023

THE WEEKEND

Get to work and start solving! Join us for some interesting talks and have fun!

8 OCT 2023

SUNDAY

Finish your solution, prepare your presentation, tell your story and submit

16 OCT 2023

AFTER THE WEEKEND

Judging and prizes

BEFORE THE WEEKEND

Say

Do

Think

Feel



NASA
SPACE APPS
CHALLENGE



spaceappschallenge.org

www.asc-csa.gc.ca/eng/events/2022/space-apps-challenge.asp

Before the weekend

Get ready for the weekend now!

- Form a team
- Pick a challenge
- Plan your solution
- Gather data
- Choose technology and tools



Before - Form a team

Don't have a team?

- Read the “NASA Space Apps hackathon 2023 Team formation guide”
- Hop on our Canada-wide Discord and join the “join-team” channel
- If all else fails ask an organizer for help in Discord
 - Introduce yourself , mention your goals for the hackathon and your skills

Have a team?

- Give yourselves a great team name!



Before - Pick a challenge

There are 2 challenge streams to pick from, your team can ONLY PICK 1 STREAM

- **NASA Challenge**

- Visit the NASA website
- In this stream your team will not be eligible for CSA judging or prizes

- **CSA (Canadian Space Agency) Challenge**

- Visit CSA's website to find Canadian specific challenges
- Register with NASA under “Create your own challenge”
- In this stream your team will not be eligible for NASA judging or prizes
- When your solution is complete send through the CSA webpage
- Each CSA challenge has a stargazer (regular) and moonwalker level (advanced)



Before - Plan your solution



- **Take stock and get inspired**
 - What kind of skills and experience do you and your team have?
 - What problems are you interested in?
 - Learn from last year's winners
- **Decide on the minimum requirements (MVP)**
 - Easy wins your team can quickly solve (connect to data, do a calculation, display data)
 - Decide on the minimum requirements (MVP) that you need to accomplish to be successful
- **Define stretch goals**
 - Tackle stretch goals after you have solved your minimum requirements
- **How will you present**
 - How you are going to “tell your solution story”

Before - Gather data

Data associated with challenges can be large and difficult to work with

- **Find the best data for your problem**
 - Most challenges will have suggested data resources
 - Ask a mentor for help if you are stumped (in Discord during the hack)
- **Explore and learn**
 - Download the data sets, learn about their format and structures
- **Condense**
 - Data sets can be huge
 - It may be beneficial to create smaller subsets of the data so it's easier to work with
- **Decide**
 - Where are you going to store the data?
 - How is your team going to produce and share the data?



Before - Choose your tech & tools



Define and setup which tools your team will use for the hack

- **Source control**
 - Setup a free shared source code repository on **Github** or **Azure**
- **Media**
 - Web, standalone, mobile app, game, video?
- **Development**
 - Which programming languages and development tools will you use?
- **Hosting**
 - How will you run and demo your solution to the world?!

DURING THE WEEKEND



NASA
SPACE APPS
CHALLENGE



spaceappschallenge.org

www.asc-csa.gc.ca/eng/events/2022/space-apps-challenge.asp

During the Weekend

- Schedule
- Open data
- Hack
- Help and feedback
- Code of conduct
- Submit your solution



During – Schedule

* Note: Subject to change. Each city may have its own scheduled events. Check with your local organizers for details and keep an eye on the chat.



6 SEPT 2023 – All day

CSA VIRTUAL KICK-OFF CEREMONY + GET STARTED

07 OCT 2023 – All Day

Solution Hacking!

07 OCT 2023 – 10am–10:30am EDT

Workshop – Introduction to Open Data (Canadian Space Agency) (Bilingual)

08 OCT 2023 – All Day

Keep on Hacking!

08 OCT 2023 - Midnight EDT

Submit your solution (see CSA submission page)

During - Open Data

There are many sources for open data that your team can use for free:

- NASA Open Data
- Canadian Space Agency Data
- Canadian Government Open Data
- AWS Open Data Registry
- Google Dataset Search



During - Hack

It's time to get to work, but **don't over do it!**

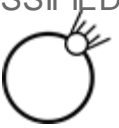
- Ask for help whenever you get blocked
- Take regular breaks
- Get some shut eye
- Get some food and stay hydrated
- Clear your mind
- Use **#SpaceApps** on **SOCIAL MEDIA** to let everyone know about the hack
- HAVE FUN!



During - Help & Feedback

Any time you are blocked or have a problem reach out to **get help!**

- Organizers
- Mentors
- Volunteers
- CSA members
- Discord (see discussion under “challenge help”)
- NASA Global Hackathon chat





During - Code of Conduct

- Space Apps is committed to providing a professional and productive forum for all participants to engage in a robust exchange of ideas regarding the challenges. All participants are responsible for maintaining professional decorum and treating each other with respect and dignity. **Bullying, discrimination, or harassment on any basis will not be tolerated** in the Space Apps Challenge
- **Please reach out right away** and contact your local organizers privately if you experience or witness discrimination, harassment, or any form of bullying during the Space Apps Challenge
 - Discord (please ensure that all discord usernames are respectful and appropriate)
 - conduct@spaceappschallenge.org



During - Submit your solution

Remember when we asked you to ONLY PICK 1 STREAM from the 2 available?

- Global NASA Challenges
- CSA (Canadian Space Agency Challenges)

GREAT! Now it's time to submit your solution to either:

- Global NASA
- OR-
- CSA (available here: [Canadian Space Agency](https://css.ca/))



During - Submit your solution (CSA)



Register your team and solution directly with CSA:

- Registration must be done **before midnight, Sunday Oct 8**
- CSA stream registrants are not eligible for Global NASA judging and prizes

Prepare your demo and presentation:

- Read the Space Apps 2021 Project “Demo” supplied by NASA for tips
- We recommend you look at “30 Seconds of Glory”

Present:

- Present your work-in-progress on Sunday to your local city judges (confirm the times and process with your local city organizers)

Submit solution:

- Solution submission must be done **before midnight (Pacific Time), Sunday October 8**

During - Submit your solution (NASA)



Register your team and solution directly with CSA:

- Global NASA stream registrants are not eligible for CSA judging and prizes

Prepare your demo and presentation:

- Read the Space Apps 2021 Project “Demo” supplied by NASA for tips
- We recommend you look at “30 Seconds of Glory” and “how the judging works”

Submit solution:

- Solution submission must be done **before midnight local time, Sunday Oct 8**

AFTER THE WEEKEND



spaceappschallenge.org

www.asc-csa.gc.ca/eng/events/2022/space-apps-challenge.asp

After – CSA Judging

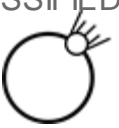
Local judging

- Teams are judged first by each city's judges to find the local winner(s)
- Due to the virtual or hybrid nature of most events, you can expect local winner selection and announcements to take up to a week (October 16)

National selection

- Local winners are put forward for national selection by CSA judges
- More details on the CSA national judging process and schedule will be provided during the weekend





After – CSA Prizes

<p>Individual</p>	<p>A personalized electronic certificate for each participant</p>
<p>Stargazer & Moonwalker</p> <p>(Note: 1 prize for each category AND complexity - 6 prizes in total)</p>	<p>1st place: Space Apps Challenge Canada bag containing CSA merchandise & virtual mentoring with CSA experts</p> <hr/> <p>2nd place: Space Apps Challenge Canada bag containing CSA merchandise</p> <hr/> <p>3rd place: Space Apps Challenge Canada bag containing CSA merchandise</p>

**Challenges and prizes are divided in two categories based on level of complexity: Stargazer (regular) & Moonwalker (advanced).*

After – Global NASA Judging

Local

- Due to the virtual nature of the event, you can expect local winner selection and announcements to take up to a week (to October 16)

Global

- Local winners are put forward for further selection rounds by Global judges
- More details on the Global judging process and schedule will be provided during the weekend



After – NASA Global Prizes



Best Use of Science	The best and most valid use of science and/or the scientific method
Best Use of Data	Best makes space data accessible, or leverages it to a unique application
Best Use of Technology	Exemplifies the most innovative use of technology
Galactic Impact	The most potential to improve life on Earth or in the universe
Best Mission Concept	The most plausible concept and design
Most Inspirational	Captures our hearts
Best Storytelling Award (NEW)	Most creatively communicates the potential of open data through the art of storytelling
Global Connection Award (NEW)	The solution that best connects people around the world through technology
Art & Technology Award (NEW)	The solution that most effectively combines technical and creative skills
Local Impact Award (NEW)	The solution that demonstrates the greatest potential for local impact

RESOURCE CENTRE



spaceappschallenge.org



Resources - Global NASA

NASA Space Apps Challenge	https://spaceappschallenge.org
Last year's winners	2022 Global Winners - NASA International Space Apps Challenge
Challenges	https://www.spaceappschallenge.org/2023/challenges/
Resources	All Resources Participant FAQ Team Formation Guide Project Submission Guide Judging and Awards Guide
Virtual Bootcamp	https://spaceappschallenge.org/resources/virtual-bootcamp/



Resources - Global NASA

Hashtag #SpaceApps

X (formerly Twitter)	NASA International Space Apps Challenge (@SpaceApps) / X (twitter.com) (@SpaceApps)
Instagram	https://www.instagram.com/nasa_spaceapps
Facebook	https://www.facebook.com/spaceappschallenge
Youtube	https://www.youtube.com/c/NASASpaceAppsChallenge



Resources - CSA



CSA Space Apps Challenge	Space Apps Challenge 2023 Canadian Space Agency (asc-csa.gc.ca)
Challenges	Space Apps Challenge Canadian Space Agency (asc-csa.gc.ca)
Prizes	Space Apps Challenge 2023 Canadian Space Agency (asc-csa.gc.ca)

Hashtag #SpaceApps

X (formerly Twitter)	Canadian Space Agency (@csa_asc) / X (twitter.com) (@CSA_ASC)
Instagram	https://www.instagram.com/canadianspaceagency/
Facebook	https://www.facebook.com/CanadianSpaceAgency
Youtube	http://www.youtube.com/user/Canadianspaceagency

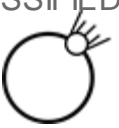
Resources - Canadian Space Society



Website	https://css.ca/
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Hashtag #SpaceApps

X (formerly Twitter)	https://twitter.com/cdnspacesociety (@CdnSpaceSociety)
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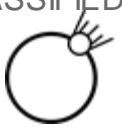
Resources - Data and Tools



NASA Open Data	https://data.nasa.gov/
Canadian Space Agency Data	https://www.asc-csa.gc.ca/eng/open-data
Canadian Government Open Data	https://open.canada.ca/en/open-data
AWS Open Data Registry	https://registry.opendata.aws/
Google Dataset Search	https://datasetsearch.research.google.com/
Github	https://www.github.com

Resources - Chat

CSA Discord	https://discord.gg/yGXGr3r76A
NASA Github	GitHub - nasa/spaceapps



Disclaimer

Prizes must be accepted as awarded – no substitution, transfers or exchanges will be permitted. The prize has no cash redemption value. Prizes must be accepted as described in these Terms and Conditions and cannot be transferred to another group.

Prizes will be awarded only on verification by the CSA that all requirements have been met by the potential winner. If for any reason a selected entrant cannot be reached through the contact information provided or does not respond within five (5) business days of being contacted, or if there is any reason a winner cannot accept the prize as awarded, their entry will be declared null and void, and another selection will be made among the remaining entries.



HAPPY HACKING, CANADA!

