



SPACE APPS IN CANADA 2021

PARTICIPANT GUIDE

Last updated: 2021-09-30



Agenda

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



WHAT IT'S ABOUT



NASA

SPACE APPS
CHALLENGE

OCTOBER 2-3, 2021

The Power of Ten

spaceappschallenge.org

What It's About – History & Purpose



Began: **2012**

Total Engaged: **150k** people from **150+** 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

What It's About - Space Apps, eh !

Hundreds of Canadians just like you have participated over the years!

- Calgary
- Edmonton
- Halifax
- Kitchener-Waterloo
- Montreal
- Ottawa
- St John's
- Toronto
- Vancouver
- Youth events



What It's About - Last Year's Event

Entirely virtual:

- **5 Space Agencies** (NASA, CSA, CNES, JAXA, ESA)
- Combined for **23 Challenges**
- 26,000+ Participants
- 3,800+ Teams
- 251 Local Events
- Universal Event in nearly 150 Countries/Territories
- 440+ Volunteers (Local Leads, Subject-Matter Experts, Ambassadors)
- **2,300+ Project Submissions**



What It's About - the Power of 10!

For the 10th anniversary of Space Apps Hackathon 10
Space Agencies are combining forces:

- **NASA**
- **Canadian Space Agency**
- Australian Space Agency
- 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



Hackathon Timeline

TO 30 SEP 2021

BEFORE THE WEEKEND

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

01 OCT 2021

FRIDAY KICKOFF

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

02 OCT 2021

THE WEEKEND

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

03 OCT 2021

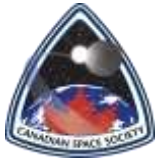
SUNDAY

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

03+ OCT 2021

AFTER THE WEEKEND

Judging and prizes



BEFORE THE WEEKEND

Say

Do

Think

Feel



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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 2021 Team formation guide”
- Hop on our Canada-wide Slack and join the “join-team” channel
- If all else fails ask an organizer for help in Slack
 - 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 3 challenge streams to pick from, your team can **ONLY PICK 1 STREAM**

- **Global NASA Challenges**
 - Visit the NASA website
 - In this stream your team will **not be eligible for CSA judging or prizes**
- **CSA (Canadian Space Agency Challenges)**
 - Visit CSA's website to find Canadian specific challenges
 - In this stream your team will **not be eligible for NASA judging or prizes**
 - In this stream registering with NASA is optional and a formality
- **Invent your own challenge**
 - Your team will be judged but will **not be eligible for NASA or CSA prizes.**



Before - Plan your solution

- **Take stock and get inspired**
 - What kind of skills and experience do you and your team have?
 - What would 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

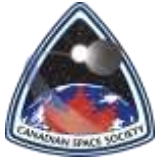
- **Find the best data for you problem**
 - Most challenges will have suggested data resources.
 - Ask a mentor for help if you are stumped (in Slack during the hack)
- **Explore and learn**
 - Download the data sets, learn about their format and structures
- **Condense**
 - Data sets can be huge.
 -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



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During the Weekend

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



During – Schedule



01 OCT 2021 - 7 pm EDT

KICK OFF CEREMONY FEATURING CHANTELLE DUBOIS & MARIE-JOSÉE POTVIN (CSA) + GET STARTED

01 OCT 2021 – 8 pm EDT

CSA PRESENTATION #1 “OSIRIS ON ODIN”

02 OCT 2021 – All Day

Solution Hacking!

02 OCT 2021 – 10am – 11am EDT

CSA PRESENTATION #2 “CSA OPEN DATA & INFORMATION PORTAL”

02 OCT 2021 – 3:30-4:00pm EDT

CSA PRESENTATION #3 “SATELLITE BUILDERS”

03 OCT 2021 - Midnight local time

SUBMIT YOUR SOLUTION

* Note:

Each city may have its own additional scheduled events. Check with your local organizers for details and keep an eye on the Slack channels.

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** in **SOCIAL MEDIA** to let everyone know about the hack
- **HAVE FUN!**



During - Help & Feedback

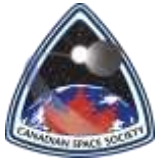
Any time your are blocked or have a problem reach out to **get help**

- Organizers
- Mentors
- Volunteers
- CSA members
- Slack (mentors channel)
- 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.
 - Slack
 - conduct@spaceappschallenge.org



During - Submit your solution

Remember when we asked you to **ONLY PICK 1 STREAM** from the 3 available?

- Global NASA Challenges
- CSA (Canadian Space Agency Challenges)
- Invent your own challenge (eligible for judging, not eligible for prizes)

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

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

“Invent your own challenge” participants are eligible for judging BUT not eligible for prizes.

These teams can submit their solution to **either** Global NASA or CSA.



During - Submit your solution (CSA)



Register your team and solution directly with CSA:

- Registration must be done **before midnight local time, Sunday Oct 3.**
- 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 local time, Sunday Oct 3.**

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 3.**



AFTER THE WEEKEND



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After – CSA Judging

Local judging

- Teams are judged first by each city’s judges to find the local winner(s).
- Due to the virtual nature of the event, you can expect local winner selection and announcements to take up to a week (October 10).

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

Individual	Personalized electronic certificate signed by a Canadian astronaut for each participant.
Local	Space Apps Challenge Canada bag containing several CSA giveaways for each member.
National Finalist	A CSA blanket for each member.
Global Canadian	Virtual mentoring sessions with CSA experts.
Special Prize	To be confirmed.



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 10).

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.



QUESTIONS & ANSWERS



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RESOURCE CENTRE



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Resources - Global NASA



NASA Space Apps Challenge	https://2021.spaceappschallenge.org/
Last year's winners	https://2020.spaceappschallenge.org/awards
Challenges	https://2021.spaceappschallenge.org/challenges/
Resources	https://www.spaceappschallenge.org/resources/ Participant FAQ Team Formation Guide Chat Guide Project Submission Guide Project Demo Guide Judging and Awards Guide
Virtual Bootcamp	https://www.spaceappschallenge.org/resources/space-apps-2021-virtual-bootcamp/

Resources - Global NASA

Hashtag #SpaceApps

Twitter	https://twitter.com/spaceapps/ (@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	https://asc-csa.gc.ca/eng/events/2021/space-apps-challenge-2021.asp
Challenges	https://asc-csa.gc.ca/eng/events/2021/space-apps-challenge-2021.asp#challenges
Prizes	https://asc-csa.gc.ca/eng/events/2021/space-apps-challenge-2021.asp#prizes

Hashtag #SpaceApps

Twitter	http://twitter.com/csa_asc/ (@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



Space Apps in Canada 2021	https://www.nasaspaceappscanada.ca/
Website	https://css.ca/

Hashtag #SpaceApps

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

Slack	https://nasaspaceappsCanada.slack.com/join/shared_invite/zt-ujc03qbo-TxmYqIUUVU4KiWuyr4BytpQ#/shared-invite/email
NASA Global Hackathon Chat Guide	https://sa-2019.s3.amazonaws.com/media/documents/Space_Apps_2020_Chat_Guide.pdf



HAPPY HACKING, CANADA!

