International Space Apps Challenge - Adelaide, Australia

Local Organising Lead

Sumen Rai is the local organising lead for the Adelaide site of the International Space Apps Challenge.
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If you have any questions or queries with any of the content in this document, please feel free to contact me!

Tentative Schedule

Saturday 20th April

0800 - Registrations Open
0845 - Welcoming (Australian sites connection)
1000 - Teams break out and start working
1230 - Lunch
???? - Link up with Australian sites for progress report
1830 - Dinner
2200 - Close up for the night

Sunday 21st April

0800 - Hacking Day 2
1100 - Progress report (requirements for submission, formats, things to include) (try to add together with a bit of lunch too!)
1300 - Deadline for submission
1345 - Presentations of submissions
1600 - Judges deliberate
1700 - Winners announced and prizes awarded
1730 - Wrapup and final thoughts
1830 - Close

Social Media

Feel free to share around the following social media links, and use them throughout the event. We will also be posting to our social media accounts, and commenting on the progress the teams are making in Australia

Twitter

Space Apps Challenge Australia - @auspaceapps
Adelaide - #spaceapps_ADL
Brisbane - #spaceapps_BNE
Canberra - #spaceapps_CBR
Melbourne - #spaceapps_MEL
Sydney - #spaceapps_SYD

Facebook

https://www.facebook.com/spaceappschallengeaus
Adelaide event page: https://www.facebook.com/events/500060426724851/

Ustream

Adelaide - http://www.ustream.tv/channel/spaceapps-adelaide

FAQs

What to bring?

We will cater for lunch over the two day event, however, as the event is free to participate, there is a limited budget. Please feel free to bring your own snacks and water to help you through the challenge.

List of items:

- Laptop + software programs you would normally use/might need for the challenge
- Power cables
- Power boards (optional, there should be many power outlets around the venue)
- Snacks (some snacks will be provided, but if you feel like you might need some more energy to keep you going, feel free to bring your own)
- Water (water and some drinks will be provided, but always a good idea to bring you own water bottle)

How do I access Wi-Fi at the event?

Details to come shortly.

I have special dietary requirements, who do I tell?

Please let Sumen know about any dietary requirements you may have. We will be providing some meals and snacks over the course of the event. Alternatively, there are a large number of food outlets accessible around the Adelaide Central Business District.

Do I need to stay for the entire event?

No, the schedule provided is a guide for the use of the venue. You are free to stay for the entire time, or only part of the event. This will also depend upon the challenges and how your team decides to spread the work.

I don't know anyone at the event, can I work by myself, how do I join a team?

This event is focused around collaboration, and everyone who is involved and participating are there for the same reasons you are; to develop solutions which solve problems for life here on Earth and in space.

We would encourage you to think beforehand about the challenges you would like to work on, and try to team up with others. Use the Facebook event page to connect with other. On the Saturday, we will help you team up with others at the event. If no one else is interested in your challenge, and you really want to do it, we can help you find a team either in Australia, or link up with other participants around the world.

A challenge I want to work on isn't on the list of challenges for the Adelaide event. Can I choose from the other NASA challenges?

There are quite a number of challenges available for participants to engage with. We've listed a few which we think might help to provide some direction, or insight into the types of challenges that you can participate in. If there is one that isn't on the list, but you would really like to try and solve, please contact Sumen and let her know which challenge you would like to tackle, and if you already have a team ready to go.

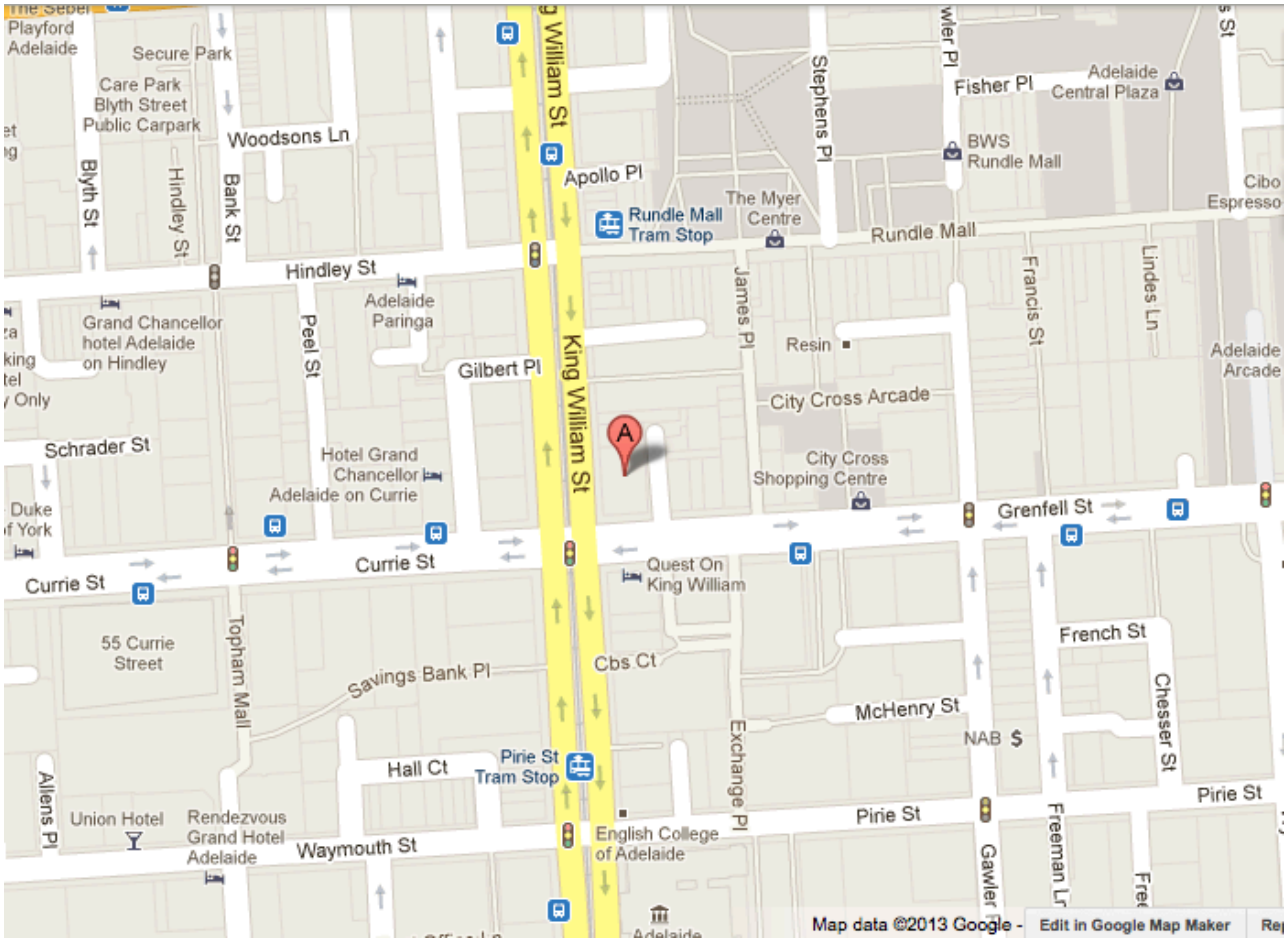
Subject Matter Experts

Some experts from the local South Australian community have kindly offered their time to help any teams having difficulties with particular aspects of their solution. We will also have a group of participants who attended last year's event to offer their recommendations and advice! Details of these fantastic people to come.

Map

The International Space Apps Challenge will be held on Level 9, 80 King William Street, in the offices of the Innovyz START program.

There is no parking provided but the venue is easily accessible by public transport.



Challenges for Adelaide

1. **ArduSAT** - ArduSat is the world's first open Space network, offering everyday people a chance to interact with, and control a satellite for the purposes of running experiments, games, applications, or whatever other new and interesting applications can be dreamt up. ArduSat is equipped with roughly 15 sensors on board, including a camera, spectrometer and Geiger counter. It also has a number of Arduino Microprocessors onboard, which allow users to upload their own application, game or experiment and run it on the satellite. This Challenge aims to extend the functionality of ArduSat: engage people with ArduSat via an application that utilizes its camera, the development of a global weather dataset, or improve ArduSat's processing power.

   Who should consider this challenge? Computer scientists, coders, engineers, scientists, people with knowledge of Arduino.

2. **NASA's Impact on the Economy** - Help tell the story of NASA's economic impact through an app, visualization, or other interactive media. This information can later be utilised as a tool to help convince and provide examples to governmental and/or commercial stakeholders on why they should fund space-based operations and applications.

   Who should consider this challenge? Educators, students, economists, social scientists, app developers, coders and technologists.

3. **Deployable Greenhouse** - For prolonged manned missions to the Moon or Mars, non-perishable food supplies may be supplemented by regenerative life support systems, such as greenhouses, that produce food on the planet surface. These structures must be capable of being delivered, deployed, operated, and maintained in extreme environments. In addition, the presence of growing plants can have a positive psychological impact on explorers far from home. The Challenge aims to develop a conceptual design of a deployable greenhouse that could be used for pre-deployment on a space mission to the Moon or Mars.

   Who should consider this challenge? Designers, biologists, engineers, scientists.

4. **'Catch a Meteor' Tracker** - Each year, millions of observable, unexpected meteors encounter the Earth's atmosphere and become a spectacle to the population below. Many of the brighter "shooting stars" actually reach the surface of the Earth, becoming "meteorites", encapsulating secrets of our universe in their charred remains. Educate the interested public about the science of Near-Earth Objects (NEOs), the likelihood of encounters with objects of various sizes, and the discoveries that are made by studying these rocky visitors to our planet.

Who should consider this challenge? App developers, web developers, designers, educators, astronomers.

5. **3D Printing Contest** - Design a 3D-printable model that reproduces, in whole or partially, any aspect of an ESA space mission. Some examples are satellites, launchers, landers, rovers, space stations modules, dioramas, instruments and ground segment equipment. One particular example (by no means exclusive) will be modeling the spacecraft, service module or, payload of the Gaia mission. Create an open hardware design for the European Space Agency (ESA) that can be generated by a 3D printer. All of the open hardware designs will go into a public domain library of designs, and ESA will pick the best one to emerge from the 2013 International Space Apps Challenge.

   Who should consider this challenge? Designers, engineers, those with experience with 3D printing.

Prizes

There are a number of prizes that Australian participants can win. Details for these are coming soon.

Confirmed prizes:

GitHub has generously provided the following prizes to teams developing solutions in Australia.

- **1st Prize** - 1 year Silver Plan (value of $600)
    - 20 Private repositories
    - Unlimited Teams
    - Unlimited Public repositories
- **2nd Prize** - 1 year Bronze Plan (value of $300)
    - 10 Private Repositories
    - Unlimited Teams
    - Unlimited Public repositories
- **3rd Prize** - half year Bronze Plan (value of $150)
    - 10 Private Repositories
    - Unlimited Teams
    - Unlimited Public repositories

Terms and Conditions

Please view the Terms and Conditions online for participation in the International Space Apps Challenge.