Twenty-five engineers, scientists, teachers, designers, developers, and students spent Saturday, April 20 and Sunday, April 21, 2013 working on solutions for the [NASA International Space Apps Challenge](http://www.umsats.ca/space-apps-2013-recap/). They were part of a worldwide event that had more than 9,000 participants working on over 600 projects in 83 cities for 83 consecutive hours – the largest hackathon in history!

The participants in [Winnipeg](http://www.umsats.ca/space-apps-2013-recap/) worked on five challenges from 10 a.m. on Saturday until 3:30 p.m. on Sunday. The projects included (click on project names for more details):

- **ArdIMU V4** – developing an Arduino based Internal Measurement Unit (IMU) to interface a magnetometer, barometer, accelerometer, and other sensors to use for attitude determination and control in ArduSat.
- **Living on Mars** – developing open source learning activity packages for educators on sustainable development for Mars habitats.
- **Go Green To Space** – designing a new rocket launching technology that could reduce the amount of fuel required to get into orbit.
- **IronFrenzy** – implementing a solution for air traffic management to help reduce delays for airlines and optimize travel for passengers.
- **Voyager Milestones Visualization UofManitoba** – visualizing the milestones of the historic Voyager spacecrafts as they travel through our solar system.
In addition to working on various challenges, participants took time to discuss their solutions with NASA Jet Propulsion Lab engineers on a Google+ Hangout and watched online streams of astronaut presentations at other Space Apps locations around the world. The participants also had a chance to stretch their legs and get the blood pumping with badminton games and tossing a football in the Engineering Information and Technology Complex atrium around 2 a.m. on Sunday.

After completing the projects, the participants presented their work to a panel of judges to determine the top two projects that would be nominated for the NASA Global Competition. The projects were judged on (i) the impact off the solution to global problems, (ii) creativity and innovation, (iii) complexity of the solution, (iv) collaborative team spirit, (v) overall product and use of technology, (vi) sustainability of project beyond the weekend, and (vii) presentation. In Winnipeg, each project was judged out of 105 total marks (35 from the local participants and 70 from the judges). The local judges were Ms Maia Schor, Engagement Lead at IC Group, who focused on the marketing and business aspects of the solution, and Mr. Reza Fazel-Darbandi, UMSATS T-Sat2 Project Lead, looking at the technical elements.

The judges selected two projects to nominate to the NASA for the global challenge for a chance to compete for the NASA Mars Exploration Program Global Award and the National Aerospace Training and Research (NASTAR) Center Award. The top two projects in Winnipeg Space Apps were:

1. Living on Mars (feature story)
2. ArdIMU V4

Congratulations to all the participants in Winnipeg and abroad for this exceptional weekend.

The Winnipeg event was organized by Dario Schor and Mohamed Nasri from the University of Manitoba Space Applications and Technology Society (UMSATS). It was sponsored by the University of Manitoba Faculty of Engineering, IEEE Winnipeg Section, and GitHub.

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- Allan McKay, Electrical and Computer Engineering at the University of Manitoba
- Mount-first Ng, Electrical and Computer Engineering at the University of Manitoba
- Maia Schor, Engagement Lead at IC Group
- Reza Fazel-Darbandi, University of Manitoba Space Applications and Technology Society
- Amber Skrabek, Faculty of Engineering at the University of Manitoba
- Janet Premak, Faculty of Engineering at the University of Manitoba
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- Ali Llewellyn, Community Advocate at NASA Johnson Space Center
- Sean Herron, Technology Strategist at NASA Headquarters

http://www.umsats.ca/space-apps-2013-recap/
Wayne Burke, Space Apps Challenge Virtual Participation Coordinator
James Costa, Creative Director at the Physe in Toronto
Jonathan Moneta, BlackBox Botany in Toronto

Here are some pictures from this weekend's event: