## **CAN YOU BUILD A...**

# **1) Design by Nature**

Design an autonomous free-flyer to inspect a spacecraft for damage from Micro-Meteoroid and Orbital Debris (MMOD).

<https://2018.spaceappschallenge.org/challenges/can-you-build/design-based-nature-fusion/details>

BD: a shield with natural sensors to determine the damage position (40)

# **2) Make Sense Out of Mars**

Develop a sensor to be used by humans on Mars

<https://2018.spaceappschallenge.org/challenges/can-you-build/make-sense-out-mars/details>

BD: Easy task.. Last years 2.nd in Turkey (TAMSAT, we :) (70)

**3) Do YOU Know When the Next Rocket Launch Is?**

Create a tool to track international rocket launch information.

<https://2018.spaceappschallenge.org/challenges/can-you-build/when-next-rocket-launch/details>

BD: Data mining … looks easy (70)

**4) Invent Your Own Challenge**

Pose your own challenge, and create a solution of your own choosing!

<https://2018.spaceappschallenge.org/challenges/can-you-build/bring-your-own-solution/details>

BD: last resort (10)

## **HELP OTHERS DISCOVER THE EARTH**

**1)Artify the Earth**

Use NASA Earth imagery data to create 1) an art piece, or 2) a tool that allows the imagery to be manipulated to create unique pieces of art.

<https://2018.spaceappschallenge.org/challenges/help-others-discover-earth/artify-earth/details>

BD: GAME DEVELOPERS and image processing experts welcome… :) (40)

**2) 1D, 2D, 3D, Go!**

Create and deploy web apps that will enable anyone to explore Earth from orbit! Visualize Earth science satellites and mission data using interactive virtual globes, such as NASA’s Web WorldWind. Use data sets from NASA’s Open Data Portal to present fire, ice, clouds, meteorites, or water temperature spectra.

<https://2018.spaceappschallenge.org/challenges/help-others-discover-earth/1d-2d-3d-go/details>

BD: Developers welcome (50)

**3) Space Apps: The Documentary**

Create a short documentary to capture the essence of NASA’s International Space Apps Challenge.

<https://2018.spaceappschallenge.org/challenges/help-others-discover-earth/space-apps-documentary/details>

BD: If we have a good photographer and a video editor :) (???)

## **VOLCANOES, ICEBERGS, AND ASTEROIDS (OH MY)**

**1) Don’t Forget the Can Opener!**

Create an easy-to-use way for people to develop their own, custom checklists – both items and plans – for specific kinds of disasters. Use NASA images, videos, or data visualizations to illustrate each disaster type, to help people understand how to prepare.

<https://2018.spaceappschallenge.org/challenges/volcanoes-icebergs-and-asteroids-oh-my/dont-forget-can-opener/details>

BD: need to read too much for probable cases (30)

**2) Spot That Fire!**

Build a crowdsourcing tool for citizens to contribute to early detection, verification, tracking, visualization, and notification of wildfires.

<https://2018.spaceappschallenge.org/challenges/volcanoes-icebergs-and-asteroids-oh-my/real-time-fire-app/details>

BD: Developers welcome, can think on it (60)

**3) Hello, Bennu!**

Tell the world about the asteroid named Bennu.

<https://2018.spaceappschallenge.org/challenges/volcanoes-icebergs-and-asteroids-oh-my/hello-bennu-osiris-rex/details>

BD: Read, understand, document and visualize…. (30)

## **WHAT THE WORLD NEEDS NOW IS...**

**1) Looking GLOBE-ally**

Analyze and/or display data to communicate interesting findings or improve public understanding of our home planet.

<https://2018.spaceappschallenge.org/challenges/what-world-needs-now/globe-observer/details>

BD: good presentation techniques required (20)

**2) The Land Where Displaced People Settle**

Characterize land cover/land use at informal settlements of displaced populations using NASA satellite datasets.

<https://2018.spaceappschallenge.org/challenges/what-world-needs-now/land-where-displaced-people-settle/details>

BD: no comment (0)

**3) Health Makes Wealth**

Integrate NASA Earth science data and citizen science data to learn more about the connections between human, animal, and environmental health.

BD: no comment (0)

<https://2018.spaceappschallenge.org/challenges/what-world-needs-now/health-makes-wealth/details>

## **AN ICY GLARE**

**1) Polar Quest**

Design a quest-like game to teach others about polar environments and how they are changing. Use NASA data to help adventurers plan their quest and present them with challenges along the way.

<https://2018.spaceappschallenge.org/challenges/icy-glare/polar-quest/details>

BD: good presentation will run (50)

**2) Find My Cryosphere!**

Design an app that lets a user pick a location and learn about the parts of Earth's cryosphere that impact that location.

<https://2018.spaceappschallenge.org/challenges/icy-glare/find-my-cryosphere/details>

BD: 3D design skills needed.. Not me (20)

**3) Polar Opposites**

Design a data analysis and/or visualization tool to show the spatial and temporal changes in Arctic and Antarctic ice to a general audience.

<https://2018.spaceappschallenge.org/challenges/icy-glare/recycle-polar-opposites/details>

BD: 3D skills again… (20)

## **A UNIVERSE OF BEAUTY AND WONDER**

**1) On the Shoulders of Giants**

Create a game using images from the Hubble Space Telescope as integral components!

<https://2018.spaceappschallenge.org/challenges/universe-beauty-and-wonder/shoulders-giants/details>

BD: Why not ! (50)

**2) Remix The Golden Record**

Develop a concept for a time capsule with content to educate an extraterrestrial civilization about human culture and our solar system.

<https://2018.spaceappschallenge.org/challenges/universe-beauty-and-wonder/remix-golden-record/details>

BD: Easy to develop!!!!!!!!!!!!! (50)

**3) Mission to the Moon!**

Use NASA Data to Plan a Rover Mission on the Moon!

<https://2018.spaceappschallenge.org/challenges/universe-beauty-and-wonder/mission-mars/details>

BD: Good challenge, may be robotic skills might help us SW/HW (60)

Update : too much reading.. And knowledge required

**4) Virtual Space Exploration**

Generate Virtual Reality environments for the surface of the Moon and Mars! Obtain 3D models from NASA resources, such as Moon Trek and Mars Trek. Integrate 3D models of surface exploration systems and habitats. Develop and deploy the virtual world at a hosting service.

<https://2018.spaceappschallenge.org/challenges/universe-beauty-and-wonder/virtual-space-exploration/details>

BD: For UNITY GUYS guess so (50)

Useful Documents

<https://s3.amazonaws.com/files.spaceappschallenge.org/Space%20Apps%202018%20Event%20Planning%20Kit.pdf>