PROJECT SUBMISSION CONTENT

PROJECT TITLE

Backyard Cosmos

PROVIDE A HIGH-LEVEL SUMMARY OF YOUR PROJECT

With the data available on all businesses and firms supporting NASA in its missions, we plan to showcase to the world their contributions with a map representing their locations. Use the search bar to see the latest innovations in your interest domains or explore the contributors just around the corner from where you live. Experience a rocket launch and the latest discoveries at a touch using perplexing Augmented Reality.

You can be assured to be inspired to make your contributions to the space society with previous collaborators on your back and the future technology to look forward to.

DESCRIBE HOW YOUR PROJECT ADDRESSES THIS CHALLENGE

What did you develop? Why is it important? What does it do? How does it work? What do you hope to achieve?

This challenge relates to the fact that connection empowers us to take action together. We examine methods for relating and contributing as one and analyze the complex network of people and ideas that contribute to space agency missions on Earth and in space. Together as a community, we can learn the societal benefits we can achieve by creating a visual representation of the expanse of the space sector's influence, showing the network of organizations and locations associated with the work of space exploration using the latest technologies.

The app developed hopes to inspire people to make their contributions to the space industry, regardless of their constrictions. We want to connect people to their passions and participate in helping the businesses in the same field achieve the unthinkable. We hope that our app will allow individuals to discover their dream jobs and accomplish their goal of working towards reaching the cosmos.

DESCRIBE HOW YOU DEVELOPED YOUR PROJECT

What inspired your team to choose this challenge? What was your approach to developing this project? What tools, coding languages, hardware, the software did you use to develop your project? What problems and achievements did your team have?

The idea of making an app which allows working in the space industry easier and achievable while proposing a solution to connect individuals and businesses to deliver their ideas is what inspired us to work on this challenge. It will open up opportunities for many space-enthusiasts to work towards their dream.

To develop the project, our primary goals were to nurture curiosity and exploration towards the cosmos while producing ways to contribute to the project here and now. We desired to make the information simple to follow and encourage anyone to succeed in accomplishing their desires.

To acquire the map to observe and locate the firms, web scraping, python, and JSON was used. To develop the user interface and app, Adobe XD, Flutter, and Dart were utilized. SolidWorks, Unity, and Android Studio were used to create the Augmented Reality simulation of the rocket launch.

While we faced initial setup problems, we achieved a lot along the way. We were able to share our skill sets and accomplish our original plan better than we could ever have imagined. We had fun communicating over the 48 hours and being able to provide ideas and solutions to solve any problems faced. Ultimately, we are proud of the app that depicts our vision for the challenge selected.

HOW DID YOU USE SPACE AGENCY DATA IN YOUR PROJECT?

You can use any open data you'd like. However, to be eligible for Judging, you must also use data from NASA and/or one of NASA's partner agencies for Space Apps 2020 (CSA, CNES, JAXA, etc.). Describe how it was used or how it influenced your project.

NASA's open data resources hold an abundance to network databases. Mapping that to a digital globe makes the data interactive and enables people to connect and contribute to the space sector. The Small business innovation research database provided by NASA is the base for our app. We want to celebrate the contributions made by the firms and their proposals to the betterment of the space science society. This data was used to obtain all the firm details. Their addresses were then plotted on a map to aid the user to collect the information about their nearest firms and their respective contributions using Web scraping and Json. To display the data html was used along with coding in python to do the rest.

https://docs.google.com/spreadsheets/d/1thc0T2mlXO5qHuB1NYVC9aop2NlER4N8mj88t7n734Q/edit?usp=sharing

As seen in the link, the information from the database was extracted and utilized in plotting the map for the geographical representation of the data.

DEMONSTRATE YOUR SOLUTION

Provide a "demo" of your project by sharing a public link to slides (up to 7) or a video (30 second limit). Please note: all links must be public and working properly (they should not require permission or registration to access them.)

https://drive.google.com/file/d/1BshG2czOZ2EVXxsYapFozA-z_P5RhK5x/view?usp=sharing

SHARE YOUR CODE (IF APPLICABLE)

https://github.com/sanjana17r/BackyardCosmos

REFERENCES: LIST THE DATA AND RESOURCES USED IN YOUR PROJECT

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1. Small business innovation research database
   https://sbir.nasa.gov/advanced_search
2. Honeybee robotics
   https://honeybeerobotics.com/
3. Space launch system 3D Model
   https://grabcad.com/library/space-launching-system-1
4. NASA History and how are we going to Moon and Mars
   https://www.nasa.gov/topics/moon-to-mars/getting-there
5. Solicitations available
   https://nspires.nasaprs.com/external/solicitations/solicitations.do;jsessionid=MPHyjHyTC5iM8hmNtrl-M4mcj4azAkwohh8INtZSY8XgZOE-S1iv!2028069790!wnp1.nasaprs.com!7006!-1!-189896326!wnp2.nasaprs.com!7006!-1

ADD SOME TAGS SO WE CAN CATEGORIZE YOUR PROJECT

#SpaceBackyard #AugmentedReality #SpaceExploration #WebScraping #SpaceIndustry #SpaceContribution #SpaceEduactionalTool #SpaceOrganizations #SpaceParternships #GovernmentActivities #Connect #NASAsmallbusiness #Database