VISHNU
UNIVERSAL LEARNING

B V Raju Institute Of Technology

(Sri Vishnu Educational Society)
UGC-Autonomous, UGC-NAAC, AICTE-NBA, Accredited Institute
Affiliated to JNTU, Hyderabad.

NASA SPACEAPPS CHALLENGE EVENT REPORT

(pre-qualifier round)

Concept: The NASA International Space Apps challenge is an international mass collaboration focused on space exploration that takes place in different cities around the world. The event embraces collaborative problem solving with a goal of producing relevant open-source solutions to address global needs applicable to both life on Earth and in space. NASA is leading this global collaboration along with the number of government collaborations and over 100 local organizing teams across the globe.

Date: 13th September 2019

Duration: 24 Hours

Location: B.V Raju Institute Of Technology, Narsapur.

Convener: Prof .K Dasaradh Ramaiah

ORGANISERS: M Krishna Prasanna,
Dr.K.Srinivasa Rao

TEAM LEADS:

- Pavan Raj Ravi
- K BhuvanaChandrika

ORGANISING TEAM:

- CH Pravalika Reddy
- Amrutha Mullapudi
- Vangala Sriharsha
- Raju
- JagannthamShashank
- S.Reshma Naidu
- ReniguntlaSuhitha
- Nagulapati Dinesh

- G Sai Govind
- D S S Deepak Varma
- PabbozVyshnavi
- Shiva Pavan Reddy
- AkshithaCh
- Gogineni Kavya
- K.Srisri Reddy
- J Risheel
- T Udaymanish Reddy
- Shiva Ganesh
- ReniguntlaSuhitha

Number Of Volunteers: 25

GOALS:

- To bring forth innovative ideas and solutions to the problem statements provided by Space Apps Team.
- To encourage students to know about hackathon culture and how to solve real time issues or problems using NASA open data.
- To form space Apps Student Community in tier 2 and tier 3 colleges.
- People selected in Pre Qualification will be sent to local level of hackathon where people will be competing with different zonal winners.

BOOTCAMPS CONDUCTED:

- **B.V.Raju Institute of Technology:**

  Date: 29th August 2019

  Guests: Sai Kiran Katapally (Founder of SUMVN).

  No of students attended: 650

The boot camps for pre-qualifier round of hackathon was conducted by BVRIT Organizing Team where our guest Mr.Sai Kiran introduced to our students about the event and its importance. We talk about how the pre-qualifier even would be conducted in the college including a procedure to register, innovate and a few tips on how to pitch and idea. He talked about our plans to start a Space Apps Community to help students interact with each other and build up their projects for the next year's challenges. It would be a technical community which would ensure to teach students new skills and encourage them to work on their projects and ideas. We introduced the challenges of previous on which the students need to work on and gave them a detail information about what the teams dealt with. The students were also meant to join the interactive session where they had opportunity and have a clear picture about the event.

ABOUT THE EVENT

CHALLENGES THAT THE STUDENTS WORKED ON:

- Make sense out of mars.
- Do you know when the next rocket launch is?
- Invent your own challenge.
- Artify the Earth.
- 1D, 2D, 3D, Go!
- Space Apps: The documentary
- Don't Forget the can Opener!
- Spot that fire!
- Hello, Bennu!
- Looking Globe-ally
- The land where displaced people settle
- Health makes wealth.
- Polar Quest
- Find my Cryosphere!
- Polar Opposites
- On the shoulders of Giants
- Remix the Golden Record
- Mission to the Moon!
- Virtual Space Exploration

COLLEGES PARTICIPATED:

- B V Raju Institute Of Technology
- V N R Vignana Jyothi Institute Of Engineering and Technology
- Nalla Narsimha Reddy College Of Engineering

NO OF PARTICIPANTS ATTENDED: 189

NO OF TEAMS REGISTERED: 48

AGENDA OF THE EVENT:

DAY1:

S.No	SESSION	TIME	VENUE
1	Registrations	13:30-14:30	Ground (in front of auditorium)
2	Inauguration By Guests and Introduction To NASA Space-app Challenge	14:30-15:00	Auditorium
3	Team Introduction and elevator pitching	15:00-16:00	Auditorium
4	Working on ideas	16:00-18:00	Auditorium
5	Break	18:00-18:30	Auditorium
6	Talk by GUESTS	18:30-19:00	Auditorium
7	Mapping and processing on ideas	19:00-21:00	Auditorium
8	Dinner	21:00-22:00	Daffodils
9	Monitoring on Ideatedteams	22:00-00:00	Auditorium

DAY-2:

9	Monitoring on Ideatedteams	00:00-01:00	Auditorium
10	Fun session	01:00-02:30	Auditorium
11	Networking and Prototyping	02:30-05:30	Auditorium
12	Validation of ideas	05:30-06:30	Auditorium
13	First round of Scrutinization	06:30-09:00	Auditorium
14	Fresh-up and breakfast	09:00-10:00	–
15	Second Round of Scrutinization	10:00-12:00	Auditorium
16	Lunch	12:00-13:00	Daffodils
17	Final pitching	13:00-14:00	Auditorium
18	Break	14:00-14:15	Auditorium
19	Award and Closing ceremony	14:15-15:00	Auditorium

ABOUT THE EVENT IN DETAIL:

The event began with the inauguration ceremony by the esteemed guests after which the elevator pitching started. Up to 50 teams were registered and participated as a part of the pre-qualifier round. During the elevator pitch, each team was given about 2 minutes to register their team into the competition.

Immediately after the pitching round, the students started working on their ideas from given challenges. The mentoring was provided to the students not only by experts from different domains related to Civil, Electrical, Electronic and Mechanical background ,but also from advanced technologies like app designing, web designing, artificial intelligence, block chain.

Students were able to interact with the mentors from SUMVN and get valuable inputs from them and validate their ideas and work on the loopholes their ideas might have.

The fun session involved music and dance which was performed by the BVRIT band. The mentor validated the ideas of students in the midnight session after which the fun sessions were conducted.The participants were further guided by the mentors in the early hours. During this time the judges provided them with constructive criticism and recommended changes in their respective ideas.

During the first scrutinization session each of the teams were given a time span of 2 minutes each to pitch all of their ideas, so as to get selected into the next round.12 teams were selected from the 50 teams to the next round. These teams were further given a time span of 3 minutes, to in detail explain the idea and give their further insights followed by the questions asked by the judges.

MEMBERS OF JURY:

- Sai Kiran Katapally
- Shanti Swaroop
- Manish

WINNERS OF HACKATHON:

Winner: Team ABCD (3D Topography on Mars)

It is about giving a 3d topography of martian surfacer using lidar sensors.These sensors notably emit light and reflect it as soon as it touches a crator or a surface,thereby detecting the time of the pusle.This helps in finding the distance of the surface and simultaneously finding the 3D view of a location.

Runner Up: Team Kronos (Putting Carbondioxide to Use)

Low amounts of solar energy are used, with copper-silver nanocoral coral cathode to convert co2 to ethanol and other hydro carbons.Iridium oxide as anode to convert water to oxygen.The products are ethanol(major product) and ethylene (minor product).This helps in effective use of Carbondioxide.

Second Runnerup : Team Renegates (No Soil Cultivation)

A no soil crop cultivation with all the required crop growth parameters. Water being the prime element for crop ,the water is made to turn into droplets into their minimal size which under a certain transition is converted into fog . This is fed to the roots of plant under an analyzed, monitoring conditions. This is done by humidifier also a structural modeling is done in which the overlapping of root system is prevented (shaped octagonal) is compatible at both indoor and outdoor farm at which the yield rate is very high rather the conventional farming.

RESOURCES PROVIDED:

- Printing brochures and posters.
- Food (dinner and breakfast)
- Tea and snacks
- Electricity
- Wi-Fi
- Water supply
- Faculty incharge
- Photography
- Social media support
- Transportation
- Kits, ID cards and Tags
- Momentos
- Certificates

Results:

- The event was succcessful with 189 participants and nearly 50 teams attending the event
- 12 teams were selected after the first scrutinzation rounds.
- Further only 3 teams were selected from the 12 teams and declared as the winners.

Feedback and Learning points:

- After the 24 hours of brainstorming, the participants understood as to how much they were aware of certain concepts and the feedbacks given by the jury memebers helped the students to mould their ideas.
- The teams studied their respective domain ideas in depth after the constructive criticism given by the mentors.

- They were able to come up with ideas to tackle asteroid collissions,global warming,communication problems in space,agriculture troubles,understanding marsian surface and many more.

Future Development:

- To create a community called Space Apps Student Community to ensure that the students learn about technology and build up their into products and solve real time problems of world which will be addressing in upcoming hackathons which are going to be conducted in the future.
- To support the students selected to the next round of Space Apps hackathon by providing relevant mentors and technical experts.
- To support innovations in the community from layman and young students.

Forwarded to the organizing body

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