

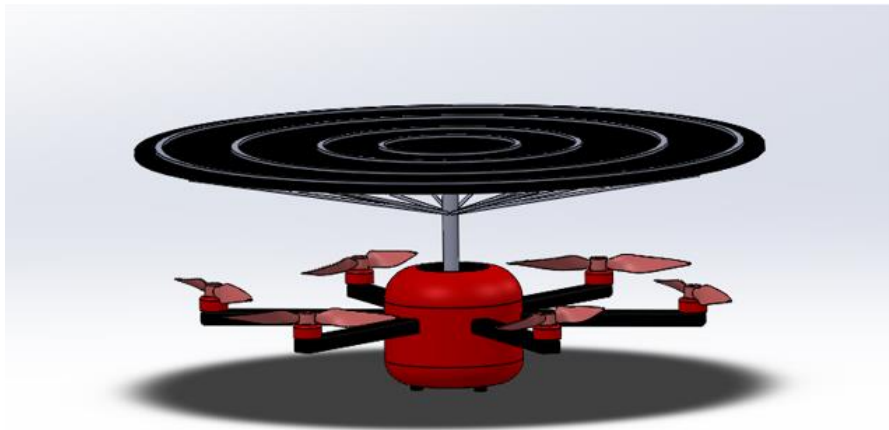
Report On NACDeC VII

Team Abhimanyu 7.0 from MVJ College of Engineering, Bangalore has secured Third position in the National Aerospace Conceptual Design Competition VII (NACDeC VII). NACDeC is an esteemed national-level competition organized by The Aeronautical Society of India (Design division and Mumbai Branch). This was the seventh edition of the competition with a problem statement to design an UAV for Martian Atmospheric Data Study (UMADS). This time ISRO was also involved in this competition along with AutoDesk as the sponsor. The final presentation round was held at The Aeronautical Society of India, Bangalore on 31st August 2024. Extremely experienced scientists, industry leaders and Professors of the Aviation and Aerospace industries of India were present at the venue as the jury member.



The competition was divided into four stages namely initial video report round, mid-term report round, final design report round, and final presentation round. The competition required specific skills from the Aerospace background some of which are Atmospheric study, Aerodynamic analysis, Propulsion analysis, Structural analysis and Energy balance for the UAV. There were in total 40+ teams which participated in this competition, after the various elimination rounds top 5 teams were called for the final presentation round. Team Abhimanyu 7.0 which includes Team leader Divyanshu Chaubey (4th year of Aerospace engineering), Sonal Sanjay Varnekar (4th year of Aerospace engineering), Preksha Krishnan (4th year of Aeronautical engineering), Oscar Michael (4th year of Aerospace engineering), Shashank G (3rd year of Aerospace engineering) and mentor Dr. P Manikandan of MVJ College of Engineering presented their Conceptual design of the UAV for Martian Exploration.

Team Abhimanyu of MVJCE has always been part of this esteemed competition and has been performing extremely well and securing the top 3 positions every time. By continuing the legacy of MVJCE, the team Abhimanyu 7.0 clinched third prize in NACDeC VII which was held on 31st August 2024. For the third position, Team Abhimanyu VII was awarded with a cash prize of 50,000 Rs and Certificate of Achievement to all the team members.



The conceptual design of the UAV for Martian Exploration by Team Abhimanyu 7.0 was a fixed wing UAV with innovative hexacopter design. The designed UAV had solar panel installed with the help of umbrella mechanism which can be stowed inside main hub during flying conditions. The UAV was designed to have maximum of 10 hops in a Martian day from sunrise to sunset.