

SCHOLASTIC ACHIEVEMENTS

- Awarded the KVPY (Kishore Vaigyanik Protsahan Yojna) Fellowship by Govt. of India [2014]
- Pursuing a Minor in Electrical Engineering.

TECHNICAL ACTIVITIES

- **Advitiy, Second Generation Satellite of IIT Bombay.** (September 2016 - Present)
Technically advanced and efficient version of Pratham in Space Program
 - Spearheaded the communication subsystem to develop the conceptual design of Advitiy incorporating the design and time constraints.
 - Revitalized Downlink and Beacon board for satellite communication using transceiver CC1101 and modified power amplifier.
 - Part of core team which selected 60 students out of +200 applicant for next generation of satellite team.
 - Studied and analyzed Orbit Propagator Model of Pratham.
 - Part of the core team which finalized Payload after considering various potential options and discussing with ISRO scientist and IIT-B professor.
 - Organized 4th Ground-Station workshop for +120 from +20 colleges across India to promote social goal.
 - Researched the Effect of Atomic Oxygen present in LEO on satellite and spacecraft.
 - Analyzed Space Environment Effect on satellite and its Technical, Structural solution.
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- **Scramjet Engine component Analysis** May 2017- Present
Guide: Prof. Krishnendu Sinha
 - Successfully completed EDx course " Hypersonics - from shock waves to scramjets"
 - Analyzed flow properties of inlet affected by shock waves in scramjet engine.
 - Developed the flow model for properties in combustor incorporating Fanno and Rayleigh flow
 - Developed the flow model in Isolator and validate it with experimental results
 - Studied Shock train and flow patterns in Isolator of scramjet
- **Core Group Member, Pratham, First Generation Satellite of IIT Bombay.** (July 2016 - Present)
In collaboration with Indian Space Research Organisation (ISRO) and with a funding of 15 Million INR, successfully launched onboard PSLV-C35 on 26th September 2016
 - Worked on designing of automated Ground-Station in the campus capturing data from various amateur satellites
 - Exhibited Pratham in Techconnect at TechFest 2017 in front of 900+ crowd over 3 days including dignitaries such as Director IIT-B, Jeff demain CEO, Hantheon.
 - Successfully tracked various satellites using RTL-SDR, providing alternating method for satellite tracking and easing the processing part.
 - Analyzed Ground-Station structure for load capacity.

TECHNICAL SKILLS

- **Programming Languages:** C++, C, Python, Bash
- **Web Development:** HTML, CSS
- **Software:** GNU Octave, MATLAB, Solidworks, AutoCAD, MS-Office, \LaTeX
- **Electronics:** Arduino, AVR, CC 1101(Transceiver)

POSITION OF RESPONSIBILITY

- **Department Academic Mentor, SMP, IIT Bombay** (April 2017 - Present)
 - Selected into a team of **24 mentors out of +150** to help sophomores of aerospace department **academically**.
 - Involved in guiding and **solving academic problems of six mentees** in **2017 – 18**
 - Attended a two day workshop organized by Tata Institute of Social Service (TISS) to learn different skills required for mentoring.
- **Coordinator, Public Relations | E-Cell, IIT Bombay.** (July 2016 - January 2017)
Leading Entrepreneurship Promoting Student Organization in the Asia
 - Single point of **contact for over 70+ college representative** from colleges in Madhya Pradesh, organized seminars, workshop and awareness campaigns related to entrepreneurship, competitions and innovation, thus having **considerable impact on the growing entrepreneurial scene** in India .
 - Responsible for **publicity of the events and activities** conducted by the E-Cell, used **innovative ways to effectively reach out to the audience by carrying out media campaigns on Facebook and Whatsapp**.
 - **Mentored, guided & helped colleges** in Madhya Pradesh to form an E-Cell of their own

FIELDS OF INTEREST

- Hypersonic, Space Flight, Artificial Intelligence, Algorithms.

EXTRA-CURRICULAR ACTIVITY

- **Social Service**
 - Volunteered in NGO Vidya for tutoring **financially and socially** underprivileged children of Mumbai.
 - Devoted 80+ Hours to Social Service **Under** NSS IIT Bombay.
- **Adventure Sports**
 - Successfully completed **Basic Mountaineering Courses** by securing Grade 'A' **out of 130 Participant** which is afflicted by Govt. Of India and Govt. Of J&K.
 - **Trek to Bhimashankar, Mumbai**
- **Technical Activities**
 - Designed and Fabricated a Bluetooth Controlled Car in 4-member team.
 - Received Special Mention in Design for **been** the only team to use **Rack & Pinion** mechanism for RC **Car**.
 - Designed and Built a Step Counter using **piezoelectric sensor**.
 - Designed and Built a Sound Amplifier using basic Electronics Component.
- **Hobbies**
 - Sports(Badminton, Table tennis)
 - Musical Instrument (Drum, Guitar)
 - **Adventure Sports(Trekking, Rappelling, Rock Climbing)**