



Aashish Sarode

Doctoral Researcher

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🌐 <https://aashishsarode.github.io>

Summary

Doctoral researcher at the Kyushu Institute of Technology Space Robotics Laboratory, completing a PhD in March 2028. My work centers on the intersection of multibody dynamics, robotic manipulation, and spacecraft systems engineering, with an emphasis on developing reliable technologies for on-orbit and lunar exploration missions. I bridge software and flight hardware by building telemetry logging and robotics visualization workflows using ROS and Foxglove, paired with practical experience developing 6U CubeSat platforms.

Experience

Kyutech Space Robotics Lab

Kitakyushu, Japan

Doctoral Student

Oct 2024 – Present

- Engineered a physical robotic testbed for microgravity casting manipulation, developing custom actuator mechanisms to validate tether deployment and payload capture kinematics.
- Bridged theoretical multibody dynamic models with hardware execution, utilizing ROS, MCAP, and Foxglove to log telemetry and analyze real-time robotic performance during experimental trials.

International Space University

São José dos Campos, São Paulo, Brazil

Teaching Associate

Jun 2023 – Aug 2023

- Managed team operations and technical instruction for interdisciplinary space studies projects.

Tohoku University Space Robotics Laboratory

Sendai, Japan

Research Intern

Jun 2022 – Aug 2022

- Designed simulation-based space debris capturing motion control algorithms.
- Improved the CAD model of a robotic arm for orbital debris capture using SolidWorks.

Tech Mahindra

Pune, India

Student Trainee

Sep 2020 – Feb 2021

- Developed data collection protocols for space debris detection satellite projects.
- Analyzed the Attitude Determination and Control System (ADCS) to model suitable orbital trajectories.

Education

Kyushu Institute of Technology (Kyutech)

Doctor of Philosophy (Ph.D.)

Space Robotics

Kitakyushu, Japan • Oct 2024 – Apr 2028

Kyushu University

Japanese Training for Advanced Studies (JTAS)

Japanese Language

Fukuoka, Japan • Apr 2024 – Sep 2024

International Space University

Master of Science (M.S.)

Space Studies

Strasbourg, France • Sept 2021 – Sept 2022

MIT ADT University

Bachelors of Technology (B.Tech)

Aerospace Engineering

Pune, India • Aug 2017 – Aug 2021

Awards

Japanese Government (MEXT) Scholarship

Apr 2024 – Mar 2028

Ministry of Education, Culture, Sports, Science and Technology

- Awarded full doctoral funding based on academic excellence and research potential in space robotics.

Projects

- Turan-1 Satellite (Mirzo Ulugbek Satellite)**

Oct 2025 – Present
- Engineered the spacecraft's mechanical architecture, producing rigorous 3D CAD models and detailed 2D manufacturing drawings to ensure precise payload and subsystem accommodation.
 - Executed hands-on Assembly, Integration, and Testing (AIT) protocols, directly translating digital structural designs into validated, flight-ready hardware.

Skills

 **Software & Data**

ROS, MCAP, Foxglove, MATLAB, Project Chrono, SolidWorks, Docker, Proxmox

 **Core Competencies**

Multibody Dynamics, Systems Engineering, Spacecraft Architecture, Assembly Integration and Testing (AIT), Orbital Mechanics

Languages

English
Fluent



Japanese
Intermediate

