

Sri Aditya Deevi

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EDUCATION

Stanford University Ph.D. in Aeronautics and Astronautics	2026 - Present
California Institute of Technology M.S. in Electrical Engineering Research: Robust multimodal perception through scene-specific fusion of RGB and complementary sensors	2022 - 2023 CGPA: 4.3/4.3
Indian Institute of Space Science and Technology (IIST) B.Tech. in Electronics & Communication Engineering Thesis: Autonomous robotic grasping using learning-based perception	2018 - 2022 CGPA: 9.60/10 ; Rank: 1/140

PROFESSIONAL EXPERIENCE

Scientist/Engineer 'SC', Mission Simulation Group U.R. Rao Satellite Centre, Indian Space Research Organisation (ISRO)	Apr 2024 - Jul 2026 Bengaluru, India
- Actively contributed to ISRO's Cooperative (SPADEX) & Non-Cooperative Docking, Electric Propulsion, Lunar Sample Return, Human Spaceflight, Indian Space Station, and Mars Landing Missions. - Developed autonomous perception systems for orbital and extraterrestrial robotics, including a monocular vision-based pose estimation pipeline for tracking non-cooperative spacecraft that achieved approximately 1.5 cm translational accuracy and 0.2 degree rotational accuracy. - Spearheaded upgrades to ISRO's 18 m Rendezvous Simulation Laboratory (RSL), introducing high-precision motion capture, extended-range sensor testing, and contact-dynamics simulation.	
Research Intern, Optical Communication Systems Group Jet Propulsion Laboratory (JPL), California Institute of Technology	Aug 2023 - Nov 2023 Pasadena, CA
- Spearheaded research to forecast key atmospheric parameters like temperature, pressure, windspeed, humidity & turbulence, critical for optical channel characterisation. - Proposed neural net architectures that improved sequence forecasting and nowcasting, reducing prediction errors by up to 25%. - Deployed the best models for live forecasting at JPL's Goldstone and Table Mountain facilities.	

KEY PUBLICATIONS

RGB-X Object Detection via Scene-Specific Fusion Modules

Sri Aditya Deevi, Connor Lee, Lu Gan, Sushruth Nagesh, Gaurav Pandey, and Soon-Jo Chung. *IEEE/CVF Winter Conference on Applications of Computer Vision (WACV)*, pp. 7366–7375, 2024.

Introduced lightweight attention-based sensor fusion that achieved over 81% object detection accuracy in adverse weather conditions while requiring 75% less paired or co-registered multimodal training data.

Adaptive Q-law Control for Closed-loop Electric Propulsion Orbit Transfer

Suraj Kumar, Sri Aditya Deevi, Aditya Rallapalli, and Bharat Kumar G. V. P. *AIAA SciTech Forum*, 2026.

Developed adaptive low-thrust guidance with mathematical guarantees of closed-loop stability and real-time onboard implementability, reducing transfer-time variability by approximately 90% and shortening worst-case transfers by nearly 30 days.

Expeditious Object Pose Estimation for Autonomous Robotic Grasping

Sri Aditya Deevi and Deepak Mishra. *International Conference on Computer Vision & Image Processing (CVIP)*, Springer Nature, 2023.

Developed efficient 6D pose-estimation models with over 93% benchmark accuracy and integrated them into an autonomous robotic pick-and-place system, utilizing a *UR3* robotic arm in simulation.

SELECTED HONORS

URSC AI/ML Challenge Winner — Won an centre-wide challenge involving more than 250 ISRO scientists.	2024
INAE Innovative Student Projects Award — Received the national award inducted as a student member by <i>Indian National Academy of Engineering (INAE)</i> for my undergraduate thesis titled “ <i>Autonomous Robotic Grasping</i> ”.	2022
Institute Gold Medal of Academic Excellence — Graduated at the top of a 140-student undergraduate cohort at IIST.	2022
Satish Dhawan Fellowship — Department of Space, Govt. of India fellowship that fully funded graduate study at Caltech.	2022

LEADERSHIP & SERVICE

Intern Supervision & Research Mentorship — Mentored and served as advisor to 10+ B.Tech. and M.Tech. students working on AI-driven space robotics, guiding research, experimentation, and technical communication.	2024 - 2026
Robotics Team Lead — Led a multidisciplinary team to a runner-up finish in a centre-wide advanced robotics training programme by designing robust architectures for extraterrestrial surface navigation.	2025
National Space Day and National Science Day Outreach, ISRO — Designed and delivered interactive space-robotics demonstrations for school students.	2024 - 2026