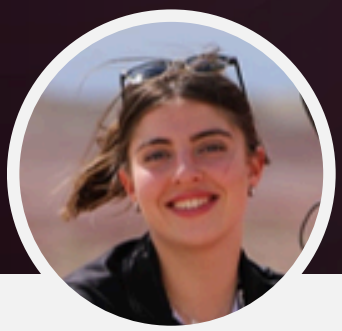

Student Innovation in Motion: Inside Monash Nova Rover

VOLUME 2, Q4 2025 | PARMIS HASSANI – MONASH NOVA ROVER

Parmis Hassani shares how student-led innovation bridged the gap between university and professional engineering

Monash Nova Rover (MNR) is a student-led team of around 100 Monash students from a wide range of disciplines, united by a shared goal: to design, build and test the next generation of Mars and Lunar rovers. Representing Monash University on the global stage, we compete in prestigious events such as the Australian Rover Challenge (ARCh) and the University Rover Challenge (URC). Over the past few years, our team has ranked 1st in Australia (2022-2023) and 7th globally in 2025.

While engineering is at the heart of what we do, MNR also champions outreach and inclusion through initiatives like Pink Rover, which promotes diversity in STEM and encourages the next generation of innovators.

When I first joined MNR, I was drawn not only to the technical challenge but also to the team culture. Among all the student-led groups, Nova stood out for its openness and shared curiosity. From day one, experienced members were generous with their knowledge and new ideas were welcomed. That environment made it easy to contribute meaningfully and grow quickly.

Over the past three years, I've taken on a range of roles; from designing the interface plate that mounts our robotic arm to the rover's body, to operating the arm during URC 2023. Eventually in 2024, I progressed to leading the team as Co-Chief Executive Officer. These experiences have been instrumental in developing both my technical capabilities and leadership skills.

One of the most memorable moments was operating the robotic arm during the URC Equipment Servicing task. Our team remotely performed dexterous operations on a mock Mars Rocket/Lander, and after countless hours of testing, we achieved our highest score to date. It was a powerful example of what can be accomplished through preparation and teamwork.

Being part of Nova Rover has also taught me how to work across disciplines: communicating effectively, managing competing priorities and adapting to evolving designs. These skills have proven invaluable beyond university. I'm currently interning at Invetech, a product realisation company in health and life sciences, where I've been able to apply the systems thinking and problem-solving approaches I developed through MNR to real-world engineering challenges.

The technical knowledge I've gained (including systems integration, CAD, electronics, testing protocols) is matched by the personal growth I've experienced. I've learned to lead with clarity, collaborate with empathy and stay resilient in the face of complex problems. And through it all, I've built lasting friendships that have made the journey even more rewarding.

My time with MNR has shown me how student-led innovation can bridge the gap between academic learning and industry application. It's an experience I'll carry forward as I pursue a career in robotics and systems engineering - guided by the same curiosity, teamwork and drive to make a difference.