



MANIPAL INSTITUTE OF TECHNOLOGY

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RECOMMENDATION LETTER

Sl. No.: **Nº 037720**

Date: **03.01.2024**

It is with great pleasure that I recommend Thakur Pranav Gopal Singh to your university. I have worked with him for three years now and I am immensely happy to see the growth he has shown as a young engineer contributing to innovation. As a faculty advisor for the student project ThrustMIT, a student rocketry team, I witnessed his dedication towards rocketry where he immersed himself to develop sounding rockets and payloads for the Spaceport America Cup competition.

His academic excellence and interest in rocketry got him in ThrustMIT as a Payload Engineer, he had a vision to endeavour new projects, while simultaneously implement the previously carried on projects. As multi-interdisciplinary subsystems are required for different projects, he learned project management and team bonding in no time which helped him grasp different perspectives within the team. He organized workshops for the technical fest Techatva 2022, webinars with India's first private rocketry startup Skyroot where he portrayed his profound presentation and oratory skills. He used to shadow his seniors and professors when a lot of testing was carried and draw inferences, this showed how keen observer and a responsible member he is.

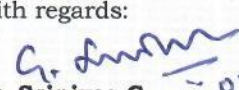
Furthermore, he was always up for manufacturing on campus irrespective of the time to deliver the components required in a timely manner to the team. He invested his time in learning newer and faster methods of manufacturing which helped in optimum utilization of resources as well as satisfying the economic constraints of the team. His one of the important characteristics was to express his thoughts in a calm and composed way if he had any objection, which showed he gave importance to the broader objective. Initially, the payload team worked on Direct Air Capture (DAC) for promoting sustainable objectives to invest in attaining carbon neutral and he played an important role in developing the mechanical aspect of the model. Ultimately, he played an important role in developing the Carbon-Nano Tube (CNT) vibration testing payload for the sounding rocket Rayquaza for SA cup 2022 in addition to helping his colleagues in the assembly process.

Since the skills he had attained by then were much more beneficial to the team, so he was promoted as a Payload & Technical Member. Moreover, he learned the craft of learning prerequisites skills required to develop a product which was being developed for the very first time. I guess he found a formula for himself for contributing to the novelty and innovation. Although he was a year younger than the rest, he was heads and shoulders above them. I have personally seen his passion and dedication for rockets in his work, which shows he is way more ready for what the future must unfold for him.

During his tenure, he helped the team in implementing the most economically feasible way of manufacturing components such as reusing the old raw materials, teaching his teammates to use 3D printer as well as EDM's and also apply a logical sequential way to assemble the complete rocket. His leadership skills came to the forefront where he took charge assuming the majority of the work and responsibility like in developing the Parallel Manipulator mechanism for their Payload 2023 in rocket Altair and designing a Novel Radial Deployment mechanism for the sounding rocket. His interest in research led him write two research papers out of these projects which are in the process of being publishing. He cheered for the team when they were down and celebrated with the team when they had it all.

I hope you have the best out of him, I wholeheartedly with no hesitation recommend him because he will leave a mark and be known.

With regards:


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