## উন্নত উৎপাদন প্রযুক্তি শ্রেষ্ঠত্ব কেন্দ্র

৫ ম তল, সিআরআর ভবন **ভারতীয় প্রযৃক্তি প্রতিষ্ঠান খড়াপুর** খড়াপুর ৭২১৩০২, পশ্চিমবঙ্গ, ভারত

## उनत विनिर्माण प्रौद्योगिकी उत्कृष्टता केंद्र

५ वीं मंजिल, सीआरआर भवन भारतीय प्रौद्योगिकी संस्थान खड़गपुर खडगपुर ७२१ ३०२, पश्चिम बंगाल, भारत

# CENTRE OF EXCELLENCE IN ADVANCED MANUFACTURING TECHNOLOGY

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Dr. Surjya Kanta Pal
Chairperson

Date: 08.10.2024

### **TO WHOM IT MAY CONCERN**

It is a great pleasure to refer **Mr. Soumik Nayak.** He has been actively pursuing an internship under my supervision since May 8, 2023, till date.

The internship project he was working on with 4 team members involved "Fabrication of six degrees of freedom robotic arm having 500 mm reach and 1 kg payload". He improved the design through stress analysis and fabricated the arm using 3D printing.

Following the completion of the robot fabrication project, he was engaged in a task involving image capture and AI-assisted augmentation. This task is a part of a project, commissioned by Tata Motors Limited in Jamshedpur, entitled as "Development of a low-cost AI-based tyre specification reading and downstream analytics". In this project, he had effectively enhanced raw tyre images, incorporating various shadowing effects, permutations of RGB values, and modifications to foreground text against diverse backgrounds. Currently Mr. Nayak is engaged in developing Computer vision-based inspection systems for Transaxle shops for Tata Motors Limited, Jamshedpur.

Mr Nayak was very consistent in his efforts, providing weekly updates and demonstrating regular progress.

It is hereby declared that the said internship is not a part of the academic curriculum of the institute where Mr Nayak studied in. The initial task involving robot fabrication was non-remunerative, while the subsequent assignments come with remuneration.

The undersigned may be contacted for further information about the intern. I wish Mr Nayak all the success in his academic career.

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#### Surjya K Pal

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