

August 24, 2023

To Whom It May Concern

This is to certify that Swapnil Kumar has been virtually working with my team at the University of Louisville from August 2020 to till now. During his ongoing research work at the University of Louisville, Swapnil has worked on teams with the School of Dentistry as well as the Materials Innovation Guild, performing design, analysis and manufacturing for oral maxillofacial surgery and metal additive manufacturing. In both the projects, Swapnil has worked with two of my PhD students, showing great interest and initiative to make progress, despite the barriers of geography and time zones. He has also jointly worked as a Research Fellow in the Department of Mechanical Engineering at ETH Zurich with a research focus on design for manufacturing, computational sciences and control systems.

Based on his work, Swapnil has published two research papers as a First Author titled “ Effects of Powder Characteristics, and Chemical Composition on the Properties of 25Cr7Ni Stainless Steel and Evaluation of Process Simulation fabricated by Laser-Powder Bed Fusion” in MDPI Metals Journal and “Design and optimization of brake disc using Multi-Objective genetic algorithm” in FISITA World Congress under my supervision. In addition to that, he has also presented his research at an IIT Madras and University of Louisville joint virtual symposium.

He was selected by Princeton University to attend workshops in the advancements in combustion, material science and high-fidelity simulations. Swapnil has been highly recommended by the Director of the Automotive Research of India where he graduated from near the top of his class in a dual degree program with Vellore Institute of Technology. Owing to the importance of the automotive industry in the Commonwealth of Kentucky, I had explored this collaboration as a way to facilitate student and faculty exchanges to benefit Speed School.

From my interactions with Swapnil for over three years, I strongly believe Swapnil has the potential to excel in a future PhD program and brings a strong record of academic excellence and commitment to succeed ahead.

Sincerely,



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