SHARDUL SHRIKHANDE

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EDUCATION

University of Wisconsin-Madison
Ph.D. Mechanical Engineering, December 2027 (Expected)
M.S. Mechanical Engineering, December 2024
Coursework: Heat Transfer, Advance FEA, Control System, Mechatronics, Scientific Computing, Energy Sustainability

Vellore Institute of Technology
B.Tech. Mechanical Engineering, June 2021
GPA: 8.46/10
Coursework: Thermodynamics, NDT, CAD/CAM, Fluid Mechanics, Robotics, Material Science, Statics and Dynamics

RESEARCH EXPERIENCE

Multiscale Metal Manufacturing Processes Lab, University of Wisconsin-Madison
Graduate Research Assistant, May 2023 - Present

- Investigating heat distribution in Friction surfacing, understanding the process through physics, observing the process through experiments and simulation

Institute of Production Engineering and Photonic Technologies (IFT), Technische Universität Wien
Visiting fellow, May 2025 – August 2025

- Collaborated with the IFT and KU Leuven to investigate Life Cycle Assessment (LCA) of friction surfacing
- Investigated grain size refinement of a new-generation FeAlOY ODS alloy deposits.

Advance Independent Study, University of Wisconsin-Madison
Researcher, December 2022 – May 2023

- Numerical solutions based on effective medium theory for solidification of PCMs in fins for HVAC
- Investigate computational models for thermal energy systems, heat exchangers with phase change material

EXPERIENCE

Cummins Inc., Columbus, Indiana
Thermal and Fluid Systems Engineer Co-Op, June 2023 – December 2023

- Documenting an unambiguous test plan with clear instructions with correct calibration, overrides, and screen file. Investigate fail part impact on the overall engine and aftertreatment performance.

University of Wisconsin-Madison, Madison, WI
Teaching Assistant, August 2022 – Present

- Energy Systems Laboratory: Instructed students on experimental methods in thermodynamics and heat transfer; guided data acquisition using [LabVIEW/EES].
- Interdisciplinary Experiential Design: Managed 8 senior design teams (32 students) regarding client timelines, product realization, and technical reporting

Wipro Ltd., Kolkata, India
Associate Consultant, July 2021 – August 2022

- Developed web pages, automate flow and software applications for Hewlett Packard customer using CRM

Myntra Designs Pvt. Ltd., Bengaluru, India
Data Analyst Intern, January 2021 - June 2021

- Built user behavior model using Random Forest ML/AI algorithm to improve acquisition, with organizing data and data visualization for statistical analysis, registering higher revenue and total acquisition of 86.9%

PUBLICATION

- **Shardul Shrikhande**, Frank E. Pfefferkorn, Analytical Heat Transfer Model to Predict Friction Surfacing Process Parameters, Procedia CIRP, Volume 137, 2025, Pages 443-448, ISSN 2212-8271
- **Shardul Shrikhande**, et al. "Computational fluid dynamics simulation on thermal performance of Al/Al2O3/SWCNT nanocoolants for turning operations." Nanomaterials 12.19 (2022): 3508.
- **Shardul Shrikhande**, et al. "Numerical investigation on thermal performance of duplex nanocoolant jets in drilling of Ti-6Al-4V alloy." Applied Sciences 12.22 (2022): 11715.
- **Shardul Shrikhande**, et al. "Centralized Smart Air Purifier System for Industrial Applications." International Virtual Conference on Industry 4.0: Select Proceedings of IVCI4. 0 2020. Singapore: Springer Singapore, 2021.

SHAURYA RACING, FORMULA SAE

- Orchestrated project execution and manufacturing timelines across 5 cross-functional departments, ensuring rigorous documentation of design validations, cost estimates, and Gantt charts.
- Engineered powertrain thermal systems (radiator, intercooler) using ANSYS Fluent; performed root cause analysis on gasket failures and manufactured a carbon fiber fan shroud to optimize engine cooling efficiency.

TECHNICAL SKILLS

MATLAB| SolidWorks| ANSYS(Static, Thermal, APLD, Fluent, CFX)| LTspice| Python| SQL| MS Office| C#| C++| VBA| EES| 5S| Word| CAN| LabView| 3 D printing| Power Point| Excel| Lean Manufacturing| Six Sigma| BOM| FMEA| GNDNT