Email: tanay.adhikary@outlook.com
Phone- +17657758047

Tanay Adhikary

www.linkedin.com/in/tanay-adhikary

2450 Sycamore Lane,
Apt 26B Mayfair Village
West Lafayette IN 47906

Education Background:

Purdue University, West Lafayette, Indiana, United States of America
Master of Science in Mechanical Engineering,
Thesis: Thermal Management and Safety of Lithium Ion batteries
Aug 17– Present

Vellore Institute of Technology (VIT University), Vellore, Tamil Nadu, India
Bachelor of Technology in Mechanical Engineering, CGPA: 9.1/10
Jul 13– Jul 17

Relevant Experience:

Graduate Student Researcher, Purdue University, USA
Thesis on Thermal Management and Safety of Lithium Ion Batteries at Energy and Transport Sciences Laboratory (ETSL)
MS Thesis research project on Study on Quantification and Mitigation of Lithium Plating in various Graphite Electrodes using Incremental Capacity Analysis, Electrochemical Impedance Spectroscopy(EIS) and Scanning Electron Microscopy(SEM) techniques
Sep 17- Present

Grader, Purdue University, USA
Graduate Student Grader for the course of ME 200 (Thermodynamics I).
Preparing and evaluating assignments for Undergraduate Students
Aug 17 - Present

Research Assistant, VIT University, India
"Conjugate Heat Transfer Study of Turbulent Plane Jet Impinging onto a Moving Flat Plate at Inclined Angle". Research project sponsored by Science & Engineering Research Board(SERB), undertaken in the Department of Science and Technology, Government of India.
Using Finite Volume Modelling, the influence of the angle of impingement and velocity of the plate on the heat transfer was successfully illustrated.
Aug 16– May 17

Summer Intern, IFB Industries, Kolkata, West Bengal, India
Overview of Fine Blanking Processes at IFB Industries.
Designed a "thrust washer" blanking tool for the R&D department. Performed thermal and fatigue analysis. Design optimization resulted in the increase of the life of the blanking tool by 5%
May 15– Jun 15

Founder, Team Anant, VIT University, Vellore, Tamil Nadu, India
Founder of Team Anant, the official team to participate in ASME's HPVC (Human Powered Vehicle Challenge)
May 15– Jun 15

Skills:

Technical: SolidWorks, AutoCAD, ANSYS, FLUENT, OpenFOAM, MasterCAM, Paraview, Tecplot, Simulink, MEISP, 3D Printing, CNC programming.

Operating Systems: Windows, Linux

Programming: Java, MATLAB, Python, C, C++

Tools and Typesetting: MS Office, LaTeX

F1 Visa

Project work:

"Analysis of Heat Transfer in a Cylindrical Lithium-ion cell"
Modelling the heat flow processes that takes place in Cylindrical Lithium Ion Cells during thermal abuse conditions, using Finite Volume Method(FVM) — Jan 18- Present

"Design of a Hydraulic Actuation system for the boom and swing drive of a 5t excavator"
A displacement-controlled actuation system was modeled that avoids the use of throttling valves leading to the loss of valuable energy. System sizing and component selection, Mathematical modeling and Multibody modeling were done in Simulink using Simscape and SimMechanics. — Aug 17- Dec 17

"**Hand Driven Can Crusher**"
Hardware project based on the Slider Crank Mechanism, modelled by Finite Element Analysis(FEA), and successfully manufactured at VIT University, Tamil Nadu, India. — Jul 15– Nov 15

"**Flow analysis of a bullet**"
Design project aimed at reducing the drag on a bullet using Ansys FLUENT (Finite Volume Method). The influence of geometry of the bullet on the drag was established and optimized. Project carried out in VIT University, Tamil Nadu, India. — Jul 16– Nov 16

Awards and Achievements:

Special Achiever Merit Certificate for exemplary performance in international/national events in recognition of meritorious academic performance. — Jul 15- Mar 16

7th rank (Overall) in ASME's HPVC 2016 as a part of Team Anant — Jul 15- Mar 16

4th rank (Overall) in ASME's HPVC EFest Asia Pacific 2017 as a part of Team Anant — Jul 16- Mar 17

Leadership Experience:

Founder of Team Anant, the official Team representing VIT University for ASME Human Powered Vehicle Challenge. Ranked 7th at ASME's HPVC 2016. — Jul 15- Mar 16

Coordinator of International Mechanical Symposium Mechnovate '15 organized by ASME VIT Chapter. — Mar 2015

Professional Affiliations:

The American Society of Mechanical Engineers (ASME): Student Member — Jul 15- May 17

Volunteering Experience:

Integral Coach Factory: In-plant Training on manufacturing of railway components — Jul 15- Nov 15

Edforall: Student Volunteer — Jul 15- May 16

Swati Foundation: Student Volunteer — Jun 16- Jul 16