Tapasvi Bhatt

Curriculum Vitae

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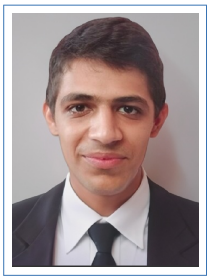

Education

2024-now : **Doctor of Philosophy (Ph.D.), School of Mechanical and Aerospace Engineering**, *Nanyang Technological University, Singapore*.

2018-2023 : **Master of Science, Chemistry**, *Birla Institute of Technology and Science, Pilani*, **(CGPA: 8.4/10)**.

2018-2023 : **Bachelor of Engineering, Mechanical**, *Birla Institute of Technology and Science, Pilani*, **(CGPA: 8.4/10)**.

Publications

Journal Articles

2024 **Bhatt, Tapasvi**, Jainil Shah, Naman Jain, and Suvanjan Bhattacharyya. Exergy and entropy analysis of heat exchanger under mechanical vibration and magnetic field. ***ASME Journal of Heat and Mass Transfer***, pages 1–30, 2024.

2024 **Bhatt, Tapasvi**, Manit Baser, Abhishek Tyagi, and Yin Kwee Ng. Cryomove: Cold chain real-time management of vaccine delivery using pcm and deep learning. ***Applied Thermal Engineering***, page 123962. Elsevier, 2024.

2024 Suvanjan Bhattacharyya, **Bhatt, Tapasvi**, Devendra Kumar Vishwakarma, Ali Cemal Benim, and John Abraham. Effect of mechanical vibration and its influence on thermal performance of a nanofluid heat exchanger. ***Numerical Heat Transfer, Part A: Applications*** , pages 1–24. Taylor & Francis, 2024.

2024 Suvanjan Bhattacharyya, **Bhatt, Tapasvi**, Abdel El Abed, and Rachid Bennacer. Improving electric vehicle battery cooling efficiency with nanofluid and vibration integration: a novel thermal management approach. ***Journal of Thermal Analysis and Calorimetry***, pages 1–17. Springer, 2024.

2023 Suvanjan Bhattacharyya, Naman Jain, **Bhatt, Tapasvi**, Humaira Yasmin, and Mohsen Sharifpur. Mini-channel cooling system for solar pv panels with hybrid magnetic nanofluid and magnetic field. ***Results in Engineering***, volume 20, page 101473. Elsevier, 2023.

Conference Articles

2023 Suvanjan Bhattacharyya, Naman Jain, **Bhatt, Tapasvi**, Soumya Ghosh, and Ali Cemal Benim. Heat transfer augmentation in a mini-channel using magnetic nanofluid and magnetic vortex. In ***International Conference on Computational Heat and Mass Transfer***, pages 3–11. Springer, 2023.

Professional Experience

May-July '22 **Thermal Power Plant Intern**, *JSW Energy, Mumbai*.

✠ As a part of the Energy vertical of JSW group, work involved suggesting measures to prevent Boiler Tube Leakages (BTL) procuring annual savings up to 16 million dollars.

✠ Two solutions among the suggested measures were implemented by JSW Energy.

May-Jun '20 **Machine Learning Intern**, *Bharat Petroleum Corporation Limited, Mumbai*.

✠ Prepared several Machine Learning models for the better functioning and efficiency of different units of the refinery, such as the Diesel Hydrodesulphurization Unit and the Fluid Catalytic Cracking Unit, using Linear Regression and Neural Networks.

✠ Extensively worked with Python and its libraries for data visualization, manipulation, and analysis, including numpy, pandas, and matplotlib.

✠ One of the Linear Regression Models was accepted and deployed into the host organization's regular operation.

Computer skills

Languages Python, Keras, MATLAB, C, C++.

Software ANSYS Fluent, COMSOL, AutoCAD, Fusion360, Solidworks.

Position of Responsibility

Jun '20 -'22 **Chairperson, American Society of Mechanical Engineers (ASME) BITS Pilani**.

✠ As the chairperson of ASME BITS Pilani chapter, lead a dedicated team of 35-40 people.

✠ As a team, participated in various CAD competitions, hosted several events during our college's technical fest APOGEE like water rocketry, hovercraft racing.

✠ Arranged multidisciplinary talks from different speakers at different occasions.

✠ Hosted ASME's first online global event (ASME EFx: BITS Pilani) as the chairperson of the student chapter. The event invited participation from 23 countries including various industry leaders along with ASME CEO: Thomas Costabile.

Teaching Roles

Fall, 2024 **Peer Tutor, MA 4002: Fluid Dynamics**, School of Mechanical and Aerospace Engineering, NTU Singapore.

Fall, 2021 **Teaching Assistantship, ME F221: Mechanisms and Machines**, Department of Mechanical Engineering, BITS Pilani.