

Muhammad Hamza Daud

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A highly motivated individual with a passion for advanced research. Aspiring to develop innovative solutions that enhance safety and structural reliability. Committed to academic excellence and impactful research in thermal and mechanical responses of materials under extreme conditions.

EDUCATION

- **University of Miskolc, Hungary:** MSc Mechanical Engineering (2023 – Present)
Thesis Topic: “Comparison of the Simulation Results for Heat Generation in Disc Brake System obtained from Siemens Nx, Ansys and Practical Experiment”
 - **National University of Sciences & Technology:** BE Mechanical Engineering (2018 – 2022)
Research Topic: “Design and Structural Analysis of Satellite Launch Vehicle”
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WORK EXPERIENCE

Trainee Engineer

Kohinoor Textile Mills (Oct 2022 -July 2023)

- Contributed to the operations of a Power Plant, gaining practical experience in meeting the energy needs of an entire industry.

Engineering Intern

Heavy Industries Taxila (HIT) (July 2021 Aug 2021)

- As an internship project, I designed and analyzed crankshafts for Armed Personnel Carriers and Self-Propelled Guns, conducting comprehensive operational stress assessments to ensure optimal performance and reliability.

Maintenance Intern

Neelum Jhelum Hydropower Project Company (Sep 2020 - Oct 2020)

- Gained insight into the functioning of Hydroelectric Power Plant systems, auxiliary systems supporting the main turbine including HVAC systems within the powerhouse.
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RESEARCH AND ROJECTS

Non-Linear Stability Studies of Unsymmetrically Supported Arches:

- Presented the research in TDK Conference and nominated to present on national level in OTDK conference.

Structural Analysis of Satellite Launch Vehicle for Aerospace applications:

- Analyzed the design and structural performance of SLV under thermal and mechanical loads.

Drop Test Analysis of Electric Extension Board:

- Designed the electric extension board and after doing finite element analysis the simulation has to be performed for drop test constraints.

Horizontal Stirling Engine Design and Assembly:

- Utilized Siemens NX to model and assemble all components of a horizontal Stirling engine. At the end conducted a precise motion simulation of the entire assembly.

Industrial Project:

- Analyzed and developed a solution for managing abrasive waste generated during the production of abrasive belts.

Paper Recycling Machine:

- Led a team of four in designing a versatile paper recycling machine tailored for various applications.

Design of External Pipe Climber:

- Worked as a group leader to Design a device which could climb up a 24mm diameter pipe and return without free fall.

Selection and Analysis of Bicycle Frame:

- Collaborated in a team project involving the design of a bicycle frame. Selected materials, established safety factors, and conducted analysis for Von-Mises stresses.

COURSES

- Supply Chain Management Specialization (Coursera)
- Digital Marketing (Google)
- Take a step forward (McKinsey and Company)

HONORS AND AWARDS

Academic Scholarships

- Received full merit-based academic scholarship from FGEI at primary and secondary level.

Science Talent Farming Scheme

- Received merit-based Scholarship and Laptop from Pakistan Science Foundation 2017.

SKILLS

- Teamwork, Time Management, Multitasking, Adaptability, MS Office, CAD Modelling, Solid works, Siemens NX

INTERESTS

- Research, Designing and Manufacturing, Badminton, Cricket, football, E-gaming, technology, Supply Chain Management.