




Behrad Mansouri

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PERSONAL PROFILE

I am a postgraduate student in the M.Sc. Advanced Mechanical Engineering programme at the University of Liverpool, on track to graduate with Distinction in January 2025. Through the various hands-on academic and coursework projects I have completed I have become proficient in project-based problem-solving and machine learning tools and techniques. I aim to leverage my knowledge and skills in a graduate role, and contribute to solving the engineering challenges of today.

EDUCATION

University of Liverpool, Liverpool, United Kingdom January 2024 - ongoing
M.Sc. in Advanced Mechanical Engineering (on track to graduate with Distinction in January 2025)

Amirkabir University of Technology (Tehran Polytechnic), Tehran, Iran September 2019 - August 2023
B.Sc. (Hons) in Mechanical Engineering (2:1)

Allameh Tabatabaei High School, Tehran, Iran
Diploma in Mathematics & Physics

WORK EXPERIENCE


Teaching Assistant September 2021
Teaching Assistant for Thermodynamics under Dr. Hashem Moradi in the Amirkabir University of Technology

TECHNICAL SKILLS




Programming: Python (NumPy, Jupyter, Matplotlib), Bash scripting, Git, Slurm **Markup Languages:** Markdown, \LaTeX
Machine Learning: TensorFlow, Keras
Engineering Software: EES, MSC Adams, CATIA

NOTABLE COURSEWORK AND RESEARCH PROJECTS



Structural Integrity May 2024

- Structural integrity analysis of a simplified aerospace component using the R6 Defect Assessment Procedure 


Energy and the Environment April 2024

- Preliminary design of a net-zero carbon emission energy mix to support a population of 5 million  
- Numerical assessment of a hypothetical energy system's performance during two different weather conditions 






Heat Transfer July 2022

- Heat transfer analysis of a falling hollow sphere 
- Generalized solution for transient heat conduction with variable conductivity 

Fuels & Combustion June 2022

- Preliminary design of a gas turbine combustor using EES 

Machine Learning

- Neural networks to calibrate biokinetic models for anaerobic digestion    August 2024
- Grouping household gas usage via Artificial Intelligence  July 2023
- Kaggle Dogs vs. Cats classification with a convolutional neural network  August 2022

ACHIEVEMENTS AND AWARDS

- Earned the distinction of being one of only two students in my cohort to graduate from the Amirkabir University of Technology Mechanical Engineering B.Sc. programme in 4 years. 2023
- Ranked in the top 0.1% of over 80,000 applicants in the Iranian national graduate entrance exam of 2023 in Mechanical Engineering. 2023
- Ranked in the top 0.4% of over 160,000 applicants in the Iranian national undergraduate entrance exam of 2019 in Mathematics & Physics. 2019
- Admitted in the First stage Nation-wide Mathematics contest of "Olympiad". 2017

REFERENCES

References available upon request