Behrad Mansouri

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Personal Profile

M.Sc. in Advanced Mechanical Engineering from the University of Liverpool, graduated in July 2025 with Distinction and received the Top Student Attainment Award. Proficient in Computer-Aided Design (CAD), Finite Element Analysis (FEA), and programming, with professional SOLIDWORKS certifications and experience in engineering design, simulation, and analysis. Seeking to apply knowledge, skills, and experience in a graduate mechanical engineering role and contribute to solving the engineering challenges of today.

Education

University of Liverpool January 2024 – July 2025
M.Sc. (Dist) in Advanced Mechanical Engineering

Amirkabir University September 2019 – August 2023
B.Sc. (Hons) in Mechanical Engineering (2:1)

Allameh Tabatabaei High School September 2016 – June 2019
Diploma in Mathematics & Physics

Work Experience

Teaching Assistant - Thermodynamics September 2021 – January 2022
- Held weekly tutorial sessions for students and marked student coursework Dr. Moradi, Amirkabir University

Certifications

Computer-Aided Design
- Certified SOLIDWORKS Surfacing Professional (CSWPA-SU) Dassault Systèmes, July 2025
- Certified SOLIDWORKS CAD Design Professional (CSWP) Dassault Systèmes, June 2025
- Certified SOLIDWORKS CAD Design Associate (CSWA) Dassault Systèmes, April 2025

Technical Skills

CAD: SOLIDWORKS, SOLIDWORKS Surfacing, CATIA
Modeling & Simulation: MATLAB, EES, MSC Adams
FEA: ANSYS Mechanical, SOLIDWORKS Simulation
Markup Languages: Markdown, LaTeX
Programming: Python (NumPy, Jupyter, Matplotlib), Bash Scripting, Git, Slurm
Machine Learning: TensorFlow, Keras

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 the Performance of a Hypothetical Energy System During 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

- Received the **Attainment Award: Top Student** from the University of Liverpool for achieving the highest year average of **81.3%** in the AMEW programme (2025)
- Earned the distinction of being one of only two students in the 2019 – 2023 cohort to graduate from the Amirkabir University's Mechanical Engineering B.Sc. programme within four years (2023)
- Ranked in the **top 0.1%** of over 80,000 applicants in the national graduate entrance exam of 2023 in Mechanical Engineering (2023)
- Ranked in the **top 0.4%** of over 160,000 applicants in the national undergraduate entrance exam of 2019 in Mathematics & Physics (2019)
- Admitted to the first stage of the national Mathematics Olympiad (2017)