

Behrad Mansouri

✉ behrad.mansouri369@gmail.com | ☎ +44 747 380 5342 | 📍 Liverpool, UK - Open to relocation
🌐 linkedin.com/in/behrad-mansouri | 🏠 github.com/behradmansouri

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 M.Sc. (Dist) in Advanced Mechanical Engineering	January 2024 – July 2025
Amirkabir University B.Sc. (Hons) in Mechanical Engineering (2:1)	September 2019 – August 2023
Allameh Tabatabaei High School Diploma in Mathematics & Physics	September 2016 – June 2019

WORK EXPERIENCE

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

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

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

Structural Integrity • Structural integrity analysis of a simplified aerospace component using the R6 Defect Assessment Procedure 🏆	May 2024
Energy and the Environment • 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 two different weather conditions 🏆	April 2024
Heat Transfer • Heat transfer analysis of a falling hollow sphere 🏆 • Generalized solution for transient heat conduction with variable conductivity 🏆	July 2022
Fuels & Combustion • Preliminary design of a gas turbine combustor using EES 🏆	June 2022
Machine Learning • Neural networks to calibrate biokinetic models for anaerobic digestion 🏆 🏆 • Grouping household gas usage via Artificial Intelligence 🏆 • Kaggle Dogs vs. Cats classification with a convolutional neural network 🏆	August 2024 July 2023 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 in the First stage Nation-wide Mathematics contest of "Olympiad" (2017)