AMMAR HASAN AL-WALI

+90-535-9799670 | ammar.wali986@gmail.com | blog.metu.edu.tr/e270622/

Education

Middle East Technical University (ODTU)

Bachelor of Science in Mechanical Engineering **June 2028**

Relevant Coursework: Manufacturing technologies, Computer Aided Design, Materials Science, Strength of Materials, Python for Engineers, Thermodynamics, Statics, dynamics

Work Experience

Mechanical Engineering Intern | Korucu Makine | Ankara, Türkiye **July 2026**

- Overviewed the manufacturing process of 30,000+ electrical transmission line components
- Operated CNC machines, high pressure aluminum casting, and surface finish equipment
- Analysed the cost of multiple components to assess production expenses and budgeting
- Modelled components in Siemens NX from factory technical drawings
- Compiled a comprehensive technical report covering all factory manufacturing processes

Research Group

Undergraduate Research | Advisor: Prof. Ozgur Bayer **Dec 2025-Present**

- Researching the use of deformable Shape Memory Alloys (SMA) fins to enhance Thermal Storage Systems (TES)
- Numerically modelled and simulated fluid interactions with a deformable SMA fin using Ansys Fluent to enhance heat transfer to the fluid, focusing on Phase Change Material (PCM)s

Projects

Personal: 125cc Two-Stroke Engine Design **Dec 2025**

- Designed a 125cc two-stroke engine in Siemens NX (54mm bore, 54.5mm stroke)
- Validated the design against industry benchmark by using RSA125 engine technical drawings
- Prepared manufacturing-oriented engineering drawings for components with dimensions
- Integrated over 8 engine components in a full assembly, ensuring appropriate clearances
- Designed exhaust and transfer port durations (182°/126°) for peak power at 9,000 RPM

Curricular: Mechatronic System (Intro to Mech Engineering) **May 2025**

- Collaborated in a four-person team to assemble, code, and debug the mechanical components of an Arduino mechatronic system
- Integrated and wired components—including ultrasonic sensors, potentiometers, and motors—developing control code to activate the motors based on sensor inputs

Skills & Interests

Technical: Siemens NX, Ansys Static Structural, Ansys Fluent, Python, Fusion 360, Microsoft Office

Interests: CAD and design, CNC machining, additive manufacturing,

Languages: Arabic (Native, Lebanon), English (Native, United Kingdom), Turkish Beginner level