

Faisal Alsahafi

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Education

King Abdulaziz University

Jan 2026

Bachelor of Science in Mechanical Engineering | GPA: 4.63 / 5.00

Honors & Awards:

- Certificate of Appreciation – Top performer on Mechanical Engineering Program Exit Exam
- Student Activity Certificate – Outstanding participation in extracurricular activities

Work Experience

Mechanical Engineering Intern

June 2025 – Aug 2025

Aramco - Mechanical Services Shops Division

Ras Tanura, Eastern Province

- Restored a 90k SAR runout measurement device inoperable for 2 years by analyzing OEM manuals, Optimizing sensor setup, and conducting lab tests to develop a comprehensive operating guideline
- Eliminated 37k SAR in external training costs by training shop operators on device operation and conduct shaft runout testing, improving fault detection and reliability
- Reverse engineered 6 mechanical components by taking manual measurements and creating SolidWorks technical drawings to enable manufacturing
- Awarded Certificate of Appreciation for technical contribution, documentation quality, and successful knowledge transfer

Projects

Design of a combustion chamber and the assembly of a micro-gas turbine system

- Led a 3-member team in the design and fabrication of a combustion chamber for a turbocharger-based gas turbine by applying thermodynamic analysis and combustion design principles, delivering a functional low-cost educational platform for the Faculty of Engineering
- Optimized combustor air distribution (20/30/50 split) for flame stabilization and turbine inlet temperature control
- Modeled the combustion chamber in SolidWorks and coordinated fabrication with a local workshop using stainless steel
- Assembled and experimentally validated the full prototype, collecting temperature, pressure, and flow data to compare theoretical predictions with actual performance

Thermal Design and Modeling of a Counter-Flow Double-Pipe Oil Cooler

- Designed a counter-flow double-pipe heat exchanger delivering 52.5 kW using LMTD and fouling-inclusive thermal modeling
- Developed a 21-iteration thermal-hydraulic model to balance heat transfer performance against allowable pressure drop constraints
- Optimized tube and annulus diameters through iterative velocity and pressure-drop calculations, meeting strict limits of 140 kPa (tube) and 5 kPa (annulus)

Skills

CAD: SolidWorks, AutoCAD

Programming: MATLAB, Python

Manufacturing: Technical Drawing, CNC Machining

Languages

Arabic (Native)

English (Full professional proficiency)

Spanish (Professional working proficiency)