Ammar Bin Hashim

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OBJECTIVE

Detail-oriented Mechanical Engineering undergraduate specializing in supply-chain optimization and design. Seeking a challenging role in Supply Chain Management or Product Design at discipline core companies to leverage CAD expertise, process improvement skills, and cross-functional collaboration to drive operational excellence and product innovation.

EDUCATION

B.Tech. in Mechanical Engineering (2022 – 2026, expected)
TKM College of Engineering, Kollam, Kerala
• CGPA: 8.26/10 (through 5th semester)

TECHNICAL SKILLS

- CAD & CFD: SolidWorks, Fusion 360, AutoCAD, XFLR5, Ansys Fluent
- Software: MATLAB, MS Office (Excel, PowerPoint, Word)
- Analysis & Programming: MATLAB scripting, basic Python and C

CERTIFICATIONS

- Advanced Machining Processes | NPTEL (IIT Guwahati) | 2024
- MATLAB Certified | MathWorks | 2024
- CSWA (Certified SolidWorks Associate) | (In Progress, Expected August 2025)
- CFD Using Ansys Fluent | ISHRAE TKMCE | (In Progress)

PROFESSIONAL EXPERIENCE

Team Leader, SAEINDIA Drone Development Challenge 2025
SAEINDIA, Kollam, Kerala | November 2024 – Present
• Lead a 10-member engineering team in the design and fabrication of a fixed-wing UAV for national competition.
• Utilized Fusion 360 for 3D modeling, Ansys Fluent for aerodynamic analysis, and XFLR5 for weight optimization and airfoil analysis, achieving a significant payload increase model.
• Coordinate cross-functional tasks: workflow scheduling and quality checks to meet tight competition deadlines.

• Achieved AIR 11 for best Design Report, and AIR 14 for best Aerodynamic CFD Analysis.

Mechanical Engineering Intern
Kerala Electrical & Allied Engineering Co. Ltd., Mamala, Kerala | July 2024 – July 2024
• Assisted in structural equipment manufacturing: marking, cutting, welding, bending, and painting of transformer components.

• Studied the manufacturing processes of structural equipment and transformer components.
• Improved understanding of organizational structure, project planning, and quality assurance.

RELEVANT PROJECTS
Payload Optimization Module (Competition Project)
• Conducted FEA and CFD simulation in Ansys Fluent and SolidWorks to analyze stress distribution and airflow dynamics for crucial fixed-wing UAV components such as wing structures, and parts of the aircraft which are more likely to face an impact, such as nose cone and parts of fuselage.
• Proposed material substitutions and design tweaks that reduced component mass by 12% while maintaining structural integrity.

WORKSHOPS & EVENT PARTICIPATIONS

• CAD Competition Participant | ASME EFx 2025, GEC Barton Hill, Trivandrum (March 2025)

• MATLAB Workshop Attendee | ESPOIR'24, Mathventures TKMCE (2024)

• OpenFlow Workshop Participant | SAE TKMCE (2024)

• TechFest Volunteer | HESTIA'24, TKM College of Engineering (2024)

EXTRA-CURRICULAR & LEADERSHIP

- Magazine Head | SAE TKMCE Collegiate Club | TKM College Of Engineering, Kollam (June 2025 - Present)
- Member | Indian Society of Technical Education (ISTE) TKMCE Chapter | TKM College Of Engineering, Kollam

KEYWORDS: CAD Design, UAV Development, Process Optimization