



Alvin Varghese
Bachelor's Of Technology
Mechanical Engineering
Final Year
FISAT, Angamaly, Kerala

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PROFILE SUMMARY

Final-year Mechanical Engineering student at the Federal Institute of Science and Technology (FISAT), with a strong foundation in design and structural analysis. Skilled in using industry-standard CAD and simulation tools to solve real-world engineering challenges. Passionate about both core mechanical domains and cutting-edge aerospace technologies, with keen interests in aerodynamics, propulsion systems, and product design. Eager to contribute to innovative projects that bridge mechanical engineering principles with advancements in the aerospace sector.

EDUCATION

Degree/Certificate	Board	Institute	Year
Btech	KTU (Kerala Technological University)	FISAT (Federal Institute Of Science And Technology)	2022-Present
Higher Secondary	CBSE Board	Chavara Public School, Pala	2022
Secondary	CBSE Board	Naipunnya Public School, Angamaly	2020

EXPERIENCE

- DESIGN AND ANALYSIS OF AERO ENGINE GEARBOX SYSTEM**
Intern, GTRE DRDO (Defence Research and Development Organisation)
– Conducting an in-depth study on the gearbox system of an aero engine
– Utilizing KISSsoft software for precise design and performance analysis
Mr Amith K Bishwakarma Sc'E'
Aug 2025 - present
- DESIGN AND ANALYSIS OF AIRCRAFT STRUCTURAL COMPONENTS**
Structural Analysis Intern, BAIL(Bangalore Aircraft Industries Pvt Ltd)
– Structural Testing of Cantilever Beam Using **Msc-Patran And Nastran**
– Cross Verification Using SOM Calculations
– Determined the Deflection and Simulated Results on Structural Test Bed
Dr. P K Dash
May 2025 - June 2025
- MECHANICAL DESIGN AND DEVELOPMENT OF UAV (UNMANNED AERIAL VEHICLE) SYSTEMS**
R&D Intern, AMOS Aerospace, Kerala
– Created Detailed CAD Drawings of UAV Systems Using **Fusion 360**
– Developed and Maintained Technical Reports Documenting Design Specifications
– Applied **GD&T** (Geometric Dimensioning and Tolerancing) Principles for Accurate Manufacturing and Assembly
June 2024 - August 2024
- MECHANICAL ASSEMBLY AND QUALITY CONTROL OF LAWNMOWER MANUFACTURING**
Manufacturing Operations Intern, Good Earth Eco Futures Pvt Ltd, Bangalore
– Assembled and Disassembled Lawnmower Components to Support Manufacturing and Maintenance Tasks.
– Identified and Removed Defective Parts During Quality Inspections to Ensure Production Standards.
April 2023 - May 2023

SKILLS

- Programming:** Python, C
- DataBase Managing:** MySQL
- Relevant Courses:** Engineering Mechanics **EST100**, Strength of Materials **MET201**, Mechanics of Fluids **MET203**, Metallurgy and Material Science **MET205**, Engineering Thermodynamics **MET202**, Fluid Machinery **MET206**, Mechanics of Machinery **MET301**, Thermal Engineering **MET303**, Heat and Mass Transfer **MET302**, Dynamics and Design of Machinery **MET304**, Automobile Engineering **MET352**, C Programming **EST102**
- Softwares:** Fusion 360, PTC Creo, PreproMax 2.0, Ansys, Msc-Patran Nastran
- Language Proficiency:** English, Malayalam, Hindi, Basic German (A2 Level)

SCHOLARSHIPS

FBOA FISAT SCHOLARSHIP

Scholarship for Undergrad Students

2022 - 2024

Recipient of the **FBOA FISAT SCHOLARSHIP** awarded by the Federal Bank Officers' Association Educational Trust (FBOAES) for academic excellence at the Federal Institute of Science and Technology (FISAT), Kerala. Earned the scholarship by securing 70% and above in semester examinations, recognizing strong academic performance and dedication to engineering studies.

CERTIFICATIONS

- **Aerospace Engineering: Aircraft Fundamentals and Advanced (UDEMY):** [Certificate](#)
- **Fracture Mechanics (ASME):** [Certificate](#)
- **Data Cleansing For Data Analytics (ASME):** [Certificate](#)
- **Introduction to the Selection of Valves (ASME):** [Certificate](#)
- **NCC C Certificate:** [Certificate](#)

ACHIEVEMENTS

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| • Secured All Kerala Rank 4 in SAE ADDC (Autonomous Drone Development Challenge) 2025 | 2025 |
| • Secured Global Innovation Rank 30 for EHPVC (Electric - Human Powered Vehicle Challenge) | 2022 |
| • Won the Best Marketing Award at ASME E-Fest Asia Pacific (EFx) India 2025. | 2025 |
| • Secured 1st Prize in Western Dance at Arangu 2024, The Annual Arts Festival of FISAT | 2024 |

LEADERSHIP & RESPONSIBILITIES

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| • Chairman, ASME FISAT | June 2025 - Present |
| – Elected Chairman of ASME FISAT student chapter, responsible for leading initiatives to enhance practical engineering knowledge among students through workshops, seminars, and participation in national-level competitions | |
| • Design Lead - SAE ADDC 2025 | Dec 2024 - April 2025 |
| – Served As Design Lead for SAE ADDC , responsible for mechanical design, CAD modeling, and system integration of an autonomous drone, while coordinating with cross-functional teams to optimize performance for competition. | |
| • Design & Analysis Lead - SAE M-Baja | April 2025 - Present |
| – Elected As Design and Analysis Lead for SAE M-BAJA, responsible for designing and performing structural analysis of the vehicle chassis to ensure strength, safety, and performance under competition conditions. | |
| • Design Co Head - TedX FISAT | Feb 2024 - April 2024 |
| – Served as a member of TEDxFISAT, contributing to the social media team by managing event promotions and enhancing digital outreach. | |

EXTRACURRICULARS

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| – NCC (NATIONAL CADET CORPS) | Nov 2022 - Feb 2025 |
| * Served as Corporal in the National Cadet Corps (NCC) and was selected for the Battalion-Level RDC (Republic Day Camp) competition, demonstrating leadership and discipline | |
| * Elected to represent Kerala at the National Integration Aerospace Camp held in Bengaluru, showcasing excellence in cadet training and inter-state collaboration. | |
| * Chosen as a member of the Battalion Guard of Honour team, reflecting commitment to ceremonial precision and military bearing. | |

REFERENCES

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| – Dr. Devi Parvathy S Assistant Professor (Senior Grade) Mechanical Engineering, FISAT |
| * E-mail : d_parvathy@fisat.ac.in |
| * Personal Website |