



AKASH B A

CAE ENGINEER



PORTFOLIO

akash-cae-portfolio.netlify.app/

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SKILLS

1.DESIGNING

- SOLID WORKS
- AUTOCAD

2. FEA

- ANSYS (Static Structure)

3. CFD

- STAR CCM +
- ANSYS (fluent)
- Autodesk CFD
- Solid works (Flow simulation)

4. 3D Printing

- Ultimate CURA

5. GRAPHIC DESIGNING

- ADOBE ILLUSTRATOR
- CANVA

EDUCATION:

**SNS College of Engineering (Autonomous),
Coimbatore**

- Bachelor of Engineering in Mechanical and Mechatronics Engineering with Additive Manufacturing (2021 - 2025)

CGPA - 8.99 (First Class with Distinction)

**Vivekananda Matric Higher Secondary
School**

- HSC | 86% | 2020 - 2021
- SSLC | 81% | 2018 - 2019

LANGUAGE :

- English - Proficient
- Tamil - Native
- Hindi - Beginner (5 Exam)

PROFESSIONAL INTERESTS:

- 3D drawing
- Renewable resource
- 3D Printing

CO-ORDINATION:

- Go-Kart
- Water Rocketry
- Dirt Bike

WORKSHOP:

- Fabrication of drone
- 3D Printing
- Fabrication of go-kart
- 3D Scanning & NDT

PROFESSIONAL SUMMARY:

Mechanical and Mechatronics Engineering student specializing in Additive Manufacturing, with strong proficiency in CAE tools including **ANSYS, SolidWorks, and STAR-CCM+**. Experienced in Finite Element Analysis (FEA), CFD simulations, and structural optimization through real-world projects and internships. Demonstrated leadership in go-kart design, industrial simulation, and prototyping. Eager to apply CAE expertise to solve engineering challenges in dynamic and innovative environments.

FREELANCE CAE ENGINEER (CFD & FEA PROJECTS)

ORGANIZATIONS: C2C CONSULTANCY (INDUSTRIAL PROJECTS) & HERIOT-WATT UNIVERSITY MALAYSIA (STUDENT ACADEMIC PROJECTS)

TOOLS: SOLIDWORKS, ANSYS, STAR-CCM+

- Successfully completed a **CFD project** ensuring constant and efficient airflow in industrial ventilation systems. (**Nov 2023 - Dec 2023**)
- Conducted a detailed pressure simulation for the Liker Tank project, enhancing its **structural analysis** and performance evaluation. (**Aug 2024**)
- Simulated the tank top cap design in **FEA** under fixed and force conditions in ANSYS to determine optimal strength and durability. (**Jun 2025**)
- Designed and analyzed **wind turbines (single, double, triple rotor)**, developed a logarithmic **spiral robotic mechanism (SpiRobs)**, and performed airflow simulation in **wave chamber pipes** using STAR-CCM+. (**Nov 2025 - Feb 2026**)

ACADEMIC PROJECTS:

- Automatic sanitizer stand
- Solar tracker
- Notching machine
- Portable radar deduction
- Automatic public light
- Refrigerator with Built-in Oven

FINAL YEAR PROJECTS:

- Airborne Energy (CFD-Based Regenerative Flow Study in EVs)

WORK EXPERIENCE:

Completed a 3-month Design Internship at **Mechnido (July 03, 2024 – Sept 03, 2024)**, working on real-time **industrial design** and **simulation projects**, including concept development, 3D modeling, and performance analysis.

PAPER PUBLISHED:

- Portable radar deduction(DOGO Rangsang - UGC Care Approved)
- Airborne Energy (International Journal of Scientific Research in Engineering and Management)

DESIGN PATENT:

- Mini Disc Plougher
- Pop up Blade using Rack & Pinion
- Design of Natural Air Cooling System

GO-KART TEAM LEADERSHIP AND DESIGN:

Served as **Vice-Captain and Design Head** of the Go-Kart Team, leading frame design and optimization through CAD and simulation. Also served as **Team Mentor**, providing technical guidance and strategic support to the team.

ACHIEVEMENT:

- 2021 - 2022 : Achieve 2nd prize in Water Rocketry
- 2022 - 2023 : Achieve 1st prize in Project Presentation
Awarded price for 1st mark in 2nd semester
Awarded price for 2nd mark in 3rd semester
Awarded for Nominee for ARP(**All Rounder Performer**)
- 2023 - 2024 : Achieve 1st prize in Paper Presentation
Awarded prize for 1st mark in 4th semester
Awarded prize for 1st mark in 5th semester
- 2024 - 2025 : Achieve 1st prize in BMC Presentation in Go-Kart
Received Team Spirit Award (Go-Kart Team)
Won 3D Prototype Award (Go-Kart Project)
Awarded for Nominee for BOG(**Best Out Going**)