Dileep Kumar S

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EDUCATION

JSS ACADEMY OF TECHNICAL EDUCATION
BE Mechanical Engineering
Bengaluru, Karnataka
Current CGPA – 7.2

RAJIV GANDHI POLYTECHNIC
Mechanical 2019 - 2022
PERCENTAGE: 60.87%

HOLY MOTHERS ENGLISH HIGH SCHOOL
SSLC - 2019
PERCENTAGE: 59.84%

SKILLS

CAD

- **CATIA**: Developed 3D models and produced detailed engineering drawings with **CATIA** as part of academic project work
- **SOLIDWORKS**: Created basic 3D models and drafted engineering drawings for academic projects.
- **AUTOCAD**: Created basic 2D drawings and layouts for engineering designs.
- **Fusion 360**: Designed simple 3D models.
- **Python, MS Office (Word, Excel)**

SOFT SKILLS

- Analytical thinking
- Problem solving

CERTIFICATIONS

- **SOLIDWORKS**
- **AUTOCAD**

LANGUAGES

- English, Kannada,
- Tamil, Hindi (Basic)

OBJECTIVE

Driven **mechanical engineering** student, pursuing B.Tech, aiming to secure an entry-level **Design** Engineer role. Proficient in utilizing **SolidWorks, CATIA**, and AutoCAD, applying **GD&T** principles, and executing basic modeling and simulation tasks. Actively expanding expertise in **FEA** and **CFD** to deliver innovative and efficient design solutions.

PROJECTS

AERODYNAMIC DESIGN OPTIMIZATION OF FIN | MAJOR PROJECT | ONGOING

Feb 2025 - Oct 2025

- Designing and optimizing Droop Nose Leading Edge (DNLE) and Morphing Trailing Edge (MTE) configurations using Bezier-PARSEC parameterization techniques.
- Implementing a hybrid optimization framework combining Particle Swarm Optimization (PSO) and Pattern Search algorithms, with aerodynamic evaluations conducted via **XFOIL** and validated through **CFD** simulations (Transition SST model).
- Achieved preliminary performance gains with a **10.25%** increase in CL3/2 /CD targeting enhanced endurance and aerodynamic efficiency.

FOOTSTEP POWER GENERATOR | MINI PROJECT

Sep 2024 - Dec 2024

- **Designed and built** a Footstep Power Generator that converts mechanical energy from footsteps into usable electrical energy using a spring, rack-and-pinion, and dynamo system.
- **Developed and tested** a circuit with a bridge rectifier and battery storage, optimizing it for efficient micro-energy harvesting.
- **Demonstrated impact** by generating sustainable energy for small loads, showcasing potential for public spaces and earning recognition at a project exhibition.

EXPERIENCE

RISHI TECH | FULL TIME

Feb 2023 - Oct 2023

- Operated CNC turning machines to produce precision cylindrical components, ensuring adherence to tight tolerances and quality standards
- Optimized machine settings and monitored production processes, resulting in improved efficiency and reduced material waste

INTERESTS

READING

CHESS