

R SABARI NITESH RAJ

M.E. – Automotive Engineering

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RS

SUMMARY

An engineering professional specializing in design and R&D, with experience in developing, testing, and refining mechanical and electro-mechanical systems. Driven by curiosity and a strong problem-solving mindset, with the ability to turn concepts into functional prototypes. Seeking opportunities to contribute to advanced engineering and product innovation.

EXPERIENCE

Design and R&D Engineer

Aero360 - Dronix Technologies Pvt. Ltd

02/2025 - Present Chennai

Drone innovations and solutions

- **Designed a horizontal spraying mechanism - 2 DOF robotic arm**
- Developed a rough sketch layout for the 2-DOF arm to achieve stable, targeted horizontal spraying
- Selected appropriate motors, gears, and linkages to balance torque, speed, and weight constraints for drone integration
- Integrated a real-time camera feedback system to enable precise positioning and spray direction control
- Conducted multiple field tests on coconut farms to validate spray coverage and adjust arm geometry for optimal reach
- **Improvements of 10L Agriculture drone - Design and R&D**
- Designed an integrated battery-connector holder to improve component safety and simplify user handling during drone operation
- Designed new arm mounts, which were cheaper to manufacture while providing the same strength as the existing model
- **Development and improvement of 5L Agriculture drone**
- Designed a part that facilitated the fitment of vertical spraying nozzles
- Assembling of a drone

Intern

SkyX Aerospace Pvt. Ltd

01/2024 - 05/2024 Coimbatore

Intern/Final Year Project

- **Designed toroidal propellers - Design using Fusion 360**
- 6 iterations of toroidal propellers were designed and tested on Ansys
- Designs that showed optimal results were further optimized and several iterations were made for the same
- Propellers were 3D printed and tested which showed successful results
- **Working Video:** <https://rb.gy/q7cn33>

EDUCATION



M.E. – Automotive Engineering

PSG College of Technology

10/2022 - 05/2024 Tamil Nadu, India

GPA

8.44 / 10



B.TECH – Automobile Engineering

(Specialization: Automotive Electronics)

SRM Institute of Science And Technology

05/2017 - 06/2021 Tamil Nadu, India

GPA

6.9 / 10

AWARDS

Best Out-going student

Best project - Drone toroidal propeller

STRENGTHS

Core Strengths

Problem-solving skills, fast learner, research and analysis, technology-savvy, and a team player

KEY ACHIEVEMENTS

SMART SRM CAMPUS Competition

Our project 'SMART campus mobility' won 2nd place in SMART SRM CAMPUS competition

TECHKNOW Competition

Our project 'Light fidelity' won 1st place in TECHKNOW competition

SKILLS

SolidWorks **Creo** **Catia**

Autodesk Fusion 360 **ANSYS** **Arduino**

IoT **MATLAB** **Simulink** **Raspberry Pi**

Arduino UNO

CERTIFICATION

Product design

Product design, designing softwares - Solidworks, Catia - CADD center

Parova Technologies

Drone basics, components and development

Sports and building Aerodynamics

Sports and building Aerodynamics - Course

Introduction to the Internet Of Things (IoT)

Introduction to the Internet Of Things (IoT) and embedded systems

Hacking and patching

Hacking and patching - Course

INTERNSHIPS

August 2019: Hydraulics, Rexroth Bosch

June 2019: Sri Balaji assemblies and plastics Pvt. Ltd.

May 2018: Cuuro motors

PROJECTS

SMART E-BIKE

01/2024 - 05/2024

SMART E-BIKE project focused on improving an existing design

- Previous iteration was looked into and **studied for its weakness and drawbacks**
- Started **working on new model's design** to overcome those drawbacks
- The design was made on SOLIDWORKS
- Made **design was tested** on Ansys, necessary bending and rigidity values were noted
- Parts were given for manufacturing, and the made parts were then assembled
- Raspberry Pi was used as the main control board to link between the GPS, Display, and electrical components inside the skate scooter
- **Working Video:** <https://rb.gy/z8nojt>

LANGUAGES

English

Native



Hindi

Native



Tamil

Native



Japanese

Beginner



German

Beginner



VOLUNTEERING

President of Annette's club

Rotary Club

01/2018 - 01/2019

Organised public and volunteering services

INTERESTS



Automobile Technology Enthusiast

Keep up-to-date with daily developments in the automobile industry



Model Car Collection

Collection of scale models of cars



Sports Fan

Follow Formula 1 (F1) and football passionately



Rubik's Cube Solver

Can solve the Rubik's cube in under 30 seconds