

# R SABARI NITESH RAJ

M.E. – Automotive Engineering

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## 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

## INTERSHIPS

### 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

<b>English</b> Native	●●●●●	<b>Hindi</b> Native	●●●●●
<b>Tamil</b> Native	●●●●●	<b>German</b> Beginner	●●●●●
<b>Japanese</b> 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