# SUNNY BABU

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A competent Engineer with nearly **7years** of experience,
**5years** of experience in Power Train & Vehicle level testing's.

## Career Objective

To get elevated in the field assigned, by exploring my skill and working hard as true my conscience for the upliftment of the organization as well as my personal growth.

## Core Competencies

Design Evaluation
NVH PT & Vehicle level Testing's
Expert in handling of Chassis Dyno
Proto Parts designing & Development
Engine dyno operating

## Work Experience

### FEV India pvt ltd Pune, as Project Engineer [July'19 - Present]

ROLE AND RESPONSIBILITY in NVH

- Planning and Performing of all NVH related Vehicle & Powertrain level testing's.
  (Like_ Pass by noise, NTF & VTF, Exterior Noise & Surface velocity, Tortional testing's).
- Successfully completed different OEM projects within the deadline.
  (Completed Projects_ Hyundai, Microcar, Lombardini, Mahindra, TATA, Ford, Greave's cotton, JD, Kubota, Shakti tractors etc.
- Have work experience on 2 & 4-wheeler bench marking like Yamaha FZS, JAWA, Microcar, TATA INTRA, Bajaj Qute, Supro, ford free style,

ROLE AND RESPONSIBILITY in Chassis Dyno

- Mass Emission Testing of various vehicles of automotive companies for Type Approval and Conformity of Production (COP) Certification below 3.5 tons.
- Test result calculations and data analysis.
- Preparation of test reports and certificate.
- OBD Test as per standard.
- Dealing with cases pertaining to extension of Type Approval of vehicles.
- Planning and Scheduling of Type Approval and COP tests.
- Calibration of Chassis Dynamometer.
- Calibration of Dilute Exhaust Analyser.

Millstones in FEV

- ✓ Microcar Full Vehicle Refinement, Get the Noise and Vibration levels as per given targets.
- ✓ John Deere 2.7L Engine, Resolved the low idle noise & vibration while PSP on condition.

### Mahindra Research Valley (R&D) Chennai, as Engineer [Jan'17 – Jun'19]

Coordinating POWER TRAIN NVH activities related to test bed level & vehicle level testing.

**MARAZZO (Diesel 1.5L)**

- Presented solution for 1.5L diesel engine "**Tak Tak**" noise by introduction of Three Lobe Cam Shaft and 7th bearing.
- Developed scissors gear to get engine better performance in noise & vibration.
- Implemented **crank pulley cover, Fuel Injection Pump (FIP) cover & Engine top cover** for noise control within defined deadlines.
- Root cause for **Gear whine noise** has been identified and presented a modification in oil pump bracket.

**XUV300 (S201_1.2L Gasolin & 1.5L Diesel)**

- Designed a test rig for **gear whine noise** root cause identification in 1.2L gasoline engine.
- Designed a test rig for 1.2L gasoline engine for **Injector Ticking Noise.**
- Implemented **crank pulley cover, Fuel Injection Pump (FIP) cover (1.5L D) & Engine top cover** for noise control within defined deadlines.
- **Target Setting of Noise** at Engine Level and Component level to determine critical frequencies and plausible causes.

- Suggested alternative designs for proto parts considering practical limitations, cost, and time-effectiveness.
- Designed & implemented for different **Test Rigs** with less cost (used scrape material).

**OTHER PROJECTS_ P601, W501, W601, Z101, New GEN XUV, Scorpio**

- Designed and implemented a **bracket** in XUV vehicle for A/C compressor noise reduction.
- Implemented **crank pulley cover, Fuel Injection Pump (FIP) cover & Engine top cover** for noise control within defined deadlines.
- **Making of Proto Parts** for new projects of Mahindra - Supporting bracket to reduce the overhanging on Turbocharger, thereby **Power Train Bending** to determine critical frequencies towards Engine Mount Sensitivity.
- Responsible for part inspection, report preparation, Calibration of standard Instruments.

**Satyaam Engineering Chennai as Design Engineer** **[Dec'15 - Jan'17]**

- Supported customers like Hero–ZF, Mahindra & Mahindra Limited, Artimpianti in designing & fabricated various proto parts.
- **MRV:** like F15 RCM (Knuckle Holder), Alternator tool C101, Rail assy. 1st 2nd R206, Selector lever pin, Piston protrusion Tool, LH&RH housing modifications rear oil seal tool etcetera.
- **HERO-ZF:** like Front Axil-Brake Caliper Fixture, Star Type Tools, F15 Nylon Bushes, Grippers, different proto parts as per required drawing.
- **ARTIMPIANTI:** like Robot base plates, Burners, different proto parts as per required drawing.
- Suggested cost & time effective procedures for production of proto parts.
- Designed & fabricated various components using software like Uni-graphics-NX9 and AutoCAD.
- Responsible for analysing customer drawings, suggesting in material selection & finalizing quotations for production.

**Siva precision dies as Shift in-charge** **[Oct'14 - May'15]**

- Managing shifts for CNC machine operation.
- Designed sleeves for drilling machines with CAD for Atlas Copco manufacturing company.
- Programming for CNC machine and operating.

## Education

- B.Tech in Mechanical Engineering from Dr.SGIET, Affiliated to JNTU KAKINADA with 64.33% in 2014.
- Class XII from Sree harsha junior college, Tenali_ state Board with 63% in 2010.
- Class X from Z.P.H School Pedaravuru_ state Board with 55.66% in 2008.

## Academic Projects

Project: 'Influence of various welding parameters on weld bead geometry during gas tungsten arc spot-on-plate welding' in BHEL-HPVP in Visakhapatnam.
Period: May'12-Jun'12

Key Learnings:

- The depth of depression and the diameter of Spot-On-Plate produced by the TIG arc were measured along with recordings of arc voltages for different welding currents in pulsing and non-pulsing condition also for different gas flow rates and different arc lengths.
- The Spot diameter decreases as the gas flow rates increases from 5lpm to 20lpm and Inversely Spot diameter increases from 4.8 to 5.8mm as the gas flow rates increases from 20 to 29lpm at 150Amps welding currents.
- The arc voltage increases from 16.7 to 24.5V and Spot diameter increases from 4 to 10mm with increase in average currents from 80A to 200A (derived from pulsing parameters) during Spot-On-Plate GTA welding trials.

## Other Technical Skills

- LMS
- MORPHY, SPARC
- Expert in handling of Engine Dynamometer using software _ Lab view – National instrumentation
- Expert in handling of Chassis Dynamometer make- M/s Horiba, Japan (For 4W & 3W).
- Exhaust Gas Analyzer: M/s Horiba, Japan
- ADVANCED CAM
- AUTO CAD: Completed Associative & Professional.

## Extracurricular Activities

- Achieved winners' cup at district (Guntur) level in Kho-Kho and Hand Ball.
- Captained Kho-Kho team for zonal sports meet of Jawaharlal Nehru technological University Kakinada (JNTUK)
- Achieved 1st place four times, in drawing competition at school level in various events.

## Personal Details

- **Date of Birth** : 17th Jun 1993
- **Permanente Address** : Ch Sunny Babu, Dr no 10-52, Pedaravuru, Tenali, AP -522202
- **Present Address** : Ch Sunny Babu, C-902, Mohar Prathima society, Rao colony, Talegaon Dhabade, Pune, MH - 410506

**Languages Know** : Telugu, Tamil, Hindi, and English.
**Hobbies** : Playing chess & Cricket.