# RESUME

JAI BALAJI D

#7, 1st floor, 15th cross, Malagala, Nagarabhavi 2nd stage

Bengaluru – 560090

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**CAREER OBJECTIVE:**

Seeking a position in the field of CAE, where I can utilize my engineering abilities and expertise that offer professional growth, while being resourceful, innovative and flexible to produce time bound exceptional results.

**WORK EXPERIENCE:**

* **Altran Technologies (India),** Bengaluruas **Consultant Engineer** from **July 2017 till date.**
* **Faurecia Clean Mobility**, Bengaluru as **FEA Analyst** from **March 2014** till **July 2017.**
* **Faurecia Emissions Control Technologies**, Bengaluru as **Junior FEA Analyst (Internship)** from **Dec 2012** till **Feb 2014.**
* **National Aerospace Laboratories,** Bengaluru as **Graduate Engineering Trainee** from **June 2010** till **July 2011.**
* **Advanced Composite Division, NAL,** Bengaluru as **Contract Engineer** from **Aug 2004** till **Oct 2005.**

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| **CAREER SUMMARY:** |

* Working for Altran Technologies India as Engineer II since Jul 2017.
* Having good experience on Hypermesh & ABAQUS.
* Presently working on FE Modelling of VW Instrument Panels.
* Have knowledge of Static, Dynamic and Thermal analysis using Abaqus as Solver.
* Perform integrity assessment of components using existing methods and processes.
* Proficient in shell and solid meshing using Hypermesh for 3+ years.

**Educational Qualification:**

* **M.Tech in Machine Design - 2013**

R.V. College of Engineering, Bengaluru.

* **B.E Mechanical Engineering - 2010**

Bengaluru Institute of Technology, Bengaluru.

* **Diploma in Mechanical Engineering - 2005**

P.E.S Polytechnic, Bengaluru.

**SKILLS SET:**

* **Software skills** :

**FE Modeling & Post Processing** : Hypermesh, Hyperview, Abaqus CAE & Viewer

**FE solver** : Abaqus, Basic Nastran

**3D Modeling**  : Catia V5, Solidworks

**Presentation Tools** : MS Word, MS Excel, MS PowerPoint

**PERSONAL SKILLS:**

* Comprehensive Problem identification & problem solving abilities.
* Planning& Documentation management techniques.
* Excellent verbal and written communication skills
* Willingness to learn, Team facilitator
* Skilled at building effective and productive working relationship with client and staff.

**COMPANY : Altran Technologies(India),** Bengaluru.

**Responsibilities:**

* Worked on 1D, Shell and Solid Finite Element Modeling of Composite & Plastic components for both aerospace as well as automotive with quality standards using Hypermesh.
* Perform integrity assessment of components & propose design changes and concepts based on those durability assessments.
* Handling complete project independently, debug the model & assisting customers to reach durability objectives.

**Projects Handled:**

* **Static analysis of MAN Truck Sunroof and Mirror**
  + - * + Static analysis to determine the strength of the assembly and failure region. Static analysis under 5G load was performed using ABAQUS.
* **FE modeling of Instrument panel(Plastic) for VW310**
  + - * + FE modeling of instrument panel for VW with stringent quality criteria(Size of element to be maintained between 1.5 - 4 mm with average element size of 3 mm).

**COMPANY : Faurecia Clean Mobility**, Bengaluru.

**Responsibilities:**

* Worked on 1D, Shell and Solid Finite Element Modeling of the components with quality standards using Hypermesh. Also involves special modeling techniques such as friction contact & tie contact modeling.
* Implement component validation using specimen and component rig test and engine test data through various simulations such as Static, Heat Transfer, Thermo Mechanical-fatigue analysis, Dynamic (Modal, Frequency Response, Shock response) analysis using ABAQUS as solver.
* Post processing of analysis results using Hyperview, Abaqus Viewer & Report preparation.
* Perform integrity assessment of components using existing methods and processes & propose design changes and concepts based on those durability assessments.
* Handling complete project independently, debug the model & assisting customers to reach durability objectives.

**Projects Handled:**

* **Heat Transfer Analysis of full Exhaust System** 
  + - * + Steady state heat transfer analysis of full exhaust system was carried out considering Conduction, Convection, Radiation and Cavity radiation.
* **Durability Analysis of SCR & DPF Sub Assembly of Commercial Vehicle**
  + - * + Shock Response Analysis was carried out on the assembly to evaluate stresses developed in the Brackets, baffles & Internal Pipes due to Road Load excitations. Thermo-mechanical fatigue analysis was carried out to predict if the components would fail under low cycle fatigue caused due to heating & cooling cycles.
* **Static and Modal Analysis of Light Vehicle Exhaust System**
  + - * + Static analysis to determine the strength of the assembly and failure region. Static analysis under 1G & 5G, gravity load were performed using ABAQUS.
* **Thermal Fatigue Analysis of Light Vehicle Exhaust Hot End**
  + - * + Thermo-Mechanical Fatigue (TMF) analysis wasperformed to evaluate life of Exhaust Hot End due to fatigue caused by repeated heating and cooling cycles.
        + Through strain life approach we estimated the life of the system under fatigue by simulating the plastic strains developed.
        + Pre-stresses within the assembly were considered by applying pretention loads and interactions at the bolting regions were simulated by frictional contacts.
        + Due to high temperature and complex contact modeling, the analysis became highly nonlinear.

**COMPANY:National Aerospace Laboratories**, Bengaluru.

**Projects Handled & responsibilities:**

* Design & detailing of modulator supports to dampen acoustic vibrations.
* Designing the door locking mechanism in the enclosure chamber.
* Inspection of welding joints of piping system for liquid nitrogen system using NDT processes.
* Operation & maintenance of GN2 system for producing acoustic sound.

**Department** : ATF Deputed to ISRO, ISITE.

**Software used** : Solidworks, AutoCAD.

**COMPANY:National Aerospace Laboratories**, Bengaluru.

**Projects done & my responsibilities:**

* Lay-up design of SARAS wing components.
* Detailing of subassemblies of the SARAS wing.
* Mould drawings of LCA rudder parts.
* Detailing of Jigs & fixtures for LCA rudder parts.
* Preparation of tool drawings for LCA rudder.

**Designation** : Contract Engineer

**Department** : Advanced Composite Division.

**Software used** : AutoCAD, Catia V5.

**Achievements**

* Training on **"Modal Analysis in Advanced Structural Dynamics and Control**" at **Indian Institute of Science**, Bengaluru.
* Paper titled "**Modal frequency analysis of automotive exhaust system**" accepted for publication in "***International Journal of mechanical Engineering & Robotics research***".
* Paper presentation at "**Advances in design, Manufacturing & Management’’** (ADMM-13) held at RVCE.
* 2014 GATE qualified with 82 percentile.
* Training on **ADAMS** MBD tool at RVCE.

**HOBBIES/INTERESTS:**

* Reading, listening to Music, Cycling &back packing.

**PERSONAL DETAILS:**

* Father’s Name : A. Devaraj
* Mother’s Name : Hemalathadevaraj
* Date of Birth : 24th Sep, 1985
* Gender/Marital Status : Male/Single
* Nationality : INDIAN
* Languages known : English, Hindi, Tamil & Kannada
* Pass port No : H0941728

**REFERENCES:**

* Mr. Sastaprasad, Scientist

ISRO, ISITE, Bengaluru.

Ph no: 080 25356342

* Mr. Satyaprakash

R.V. College of Engineering,Dept. of Mechanical Engineering.

Ph no: 9901237003

* Mr. Murugan S, Scientist

NAL,Acoustic Test Facility, Bengaluru.

Ph no: 080 25051791

**DECLARATION:**

I hereby declare that the above-mentioned details are true to the best of my knowledge and belief.

Place: Bengaluru (Jai Balaji D)