

Name : **Gaurav Kumar**

Contact no.: **+919743906833**

B.E, Mechanical Engineering

Email id: **Gauravsingh963@gmail.com**

Current Role: **Design Engineer**

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## **Career Objective**

To work for an esteemed organization in the environment of new challenges, technological advancements and continuous learning opportunities which utilizes my relevant knowledge and skills to achieve the organization's objective & goals and enhances my personal and professional growth.

## **Profile Summary**

- Role : **Design Engineer**
- Total work experience: **2 years 3 months**
- Associated with **Tata Engineering Industrial Services (TCS-EIS)** for the last 2 years & 3 months and working on the designing process of **Rolls Royce Aero engines**.
- My major areas of experiences have been project deliveries of various sizes and I have hands-on experience on modeling softwares **Unigraphics NX & CATIA V5** with supporting tools used **Team center & Vis-Mockup**, through which I have gained rich cross functional expertise in Component Design, Assembly Design, Mechanical & Electrical Routings, Sheet Metal Design, Modeling, Surface Design, GD & T, NPD, Concept Development and specialized in Aerospace, Mechanical and Structural Design.

## **Career Profile**

**Tata Consultancy Services Ltd., Bangalore**

**Role: Design Engineer – EIS Aerospace**

**Client: Rolls Royce Aero Engines, Derby, UK**

Project	Trent XWB – 97K, 84K & 84EP	Duration : 19 months
Role	<b>Design Engineer</b> <ul style="list-style-type: none"><li>• Input study and estimate the complexity of design requirements</li><li>• Specialized in Designing of Fuel System, Oil System, Air System and Drain System</li><li>• Pipe routing ( FUEL, OIL, AIR &amp; DRAINS pipes)</li><li>• Conceptual and Details Design of Tube assemblies and electrical harnesses</li><li>• Conceptual and Detail Design of Secondary structures (Brackets) to support Pipe assemblies, Electrical Harnesses and various Equipments</li><li>• Conceptual and Detail Design of End Fittings of pipe and Assembly Design</li><li>• Concept design and Detail Design of external parts as structures and units of Aero engines</li><li>• Design calculations, Geometric Dimensioning and Tolerancing and Tolerance Stack-up Analysis</li><li>• Design Documentation (Review presentations, Design Definition Report) and Clash check analysis</li><li>• Mechanical routings and Electrical routings (Pipe routings and Electrical Harness routings)</li><li>• Creation of Schematics of Fuel, Oil &amp; AIR system according to the requirements and understanding of Electrical Schematics.</li><li>• Creation of Interface control documents (ICDs) of various interfaces including Casings, Casing flanges, Units and mounts.</li><li>• Product Data Management (PDM) and Product Lifecycle Management (PLM)</li><li>• Modifying and optimizing the design according to the stress analysis report of concepts, Providing Fitting Instructions to Manufacturers and continuously participating in generating productivity improvements and cost reduction ideas</li></ul>	
Tools	Unigraphics NX 11, CATIA V5, TeamCenter 10, Vis Mockup, MS Office	

<b>Project</b>	<b>RB3043 – Engine Externals</b> <b>Duration : 8 months</b>
<b>Client</b>	<b>Rolls Royce Aero Engines, Germany</b>
<b>Role</b>	<b>Design Engineer</b> <ul style="list-style-type: none"> <li>• Input study and estimate the complexity of design requirements</li> <li>• Pipe routing (AIR, OIL, DRAINS &amp; FUEL systems)</li> <li>• Conceptual and Detail Design of Secondary structures (Brackets) to support Pipe assemblies, Electrical Harnesses and various Equipments</li> <li>• Electrical harness routing</li> <li>• Conceptual and Detail Design of End Fittings of pipe</li> <li>• Design Documentation (Checklists, Weight data Sheet, Review presentations, Interface control document and Design Definition Report)</li> <li>• Bolt &amp; Rivet Calculations</li> <li>• Creation of Schematics of Fuel, Oil &amp; AIR system according to the requirements and understanding of Electrical Schematics.</li> </ul>
<b>Tools</b>	Unigraphics NX 9.0, CATIA V5, TeamCenter 10, Vis Mockup, MS Office

### **Academic Credentials**

<b>Education</b>	<b>College/School</b>	<b>Board / University</b>	<b>Year of Completion</b>	<b>Score (% or CGPA)</b>
B.E	Siddaganga Institute of Technology, Tumkur	V.T.U	2016	8.64/10
12th	R.r.s college, Siwan	B.S.E.B	2011	61%
10th	H.s Bashantpur	B.S.E.B	2009	64%

### **Industrial Exposures:**

<b>Certification</b>	<b>Organization</b>	<b>Duration (days)</b>
Industrial training	NSPCL, Rourkela	45

### **Technical Certification:**

<b>Certification</b>	<b>Organization</b>
CREO 2.0	Computer foundation pvt ltd., Patna
ASME Standard and Certification	ASME
Aircraft Structural Design	TCS Business Domain
Certificate in Manufacturing Concepts	TCS Business Domain
Certificate in Accounting Fundamentals	TCS Business Domain
Certificate in Manufacturing Operations Management	TCS Business Domain

### **Software Knowledge:**

- Technical: Unigraphics NX 9.0, CATIA V5, CREO 2.0, SOLID WORKS, XFLR 5, ANSYS 14.0 (Flow Analysis), SOLID EDGE (2D) and Team center (PLM).
- Non-Technical: MS Office – Word, Excel, Power-point

## **Projects:**

- Design and development of **Diamond wing configuration**” (an unconventional design) and regarded as the most unique Configuration of aircraft at **SAE AERO (West) 2016- Regular Category** held in Los Angeles, CA, USA organized by **SAE International, Lockheed martin and Boeing.**
- Development of an Airfoil **“SE\_GA1”** of wing of aircraft with efficient Aerodynamic performances
- Design and Fabrication of **“Gimbal Incorporated Unmanned Ground Vehicle”** as Mini project
- Design and Fabrication of **UAVs** (Unmanned Aerial Vehicles)
- SAE Aero Design Series (East) 2014 – Advance Category
- Development of **Lane Changing Algorithm** for KPIT Sparkle 2016
- Design and fabrication of **“Automatic Braking and Bumper Extension System”** as major project
- Design and prototype development of **Vertical Farming** during ILP, a part of TCS-EIS training of NPD

## **Skill Sets:**

- Quick and good learner, Positive attitude, Adaptive, Design passionate & Innovative.
- Skilled in Time Management and possess good interpersonal and communication skills
- Team work and leadership experience.

## **Positions of Responsibilities Held:**

- **Design Lead** of “Team Soaring Eagles”, the **SAE International Aero Design team** of SIT, Tumkur during 2015-16
- **Team lead** (Karnataka reason) as a design intern in Dimi works ( A 3D printing company) during June’16 to August’16
- Member of SIT SAE Collegiate Club and SAE INTERNATIONAL

## **Achievements and Awards:**

- Participated and represented India with the **“Most unique design in SAE Aero”** at the **SAE Aero Design-2016** (west) organized by **SAE International, Boeing and Lockheed Martin at Los Angeles, CA, USA.**
- Secured **8th** position overall in the Advance Category at the **SAE Aero Design-2014** (East) organized by SAE International, Lockheed Martin at Georgia, USA
- **Winner** of “Hobby Project Competition” in IdEEEas-2015, a national level technical fest organized by **IEEE** at SIT, Tumkur
- Winner of **“Catia Design Contest”** in Momentum 2015, a national level technical Symposium at SIT, Tumkur.
- Participated with “Quadcopter” and acquired 5th rank in Techkriti-2015 (Asia’s largest technical fest) organized by IIT-Kanpur.
- Participated in event Robo-race with my “Robot with Servo Actuated Steering Mechanism” at Robocore-2015 organized by IEEE
- As hobby, worked on mathematics problem solving for more than 3 months at Evelyn Learning System and achieved 4.5 stars out of 5 as feedback for my problem solving skills.

**Personal Details:**

- Date Of Birth : 24th November 1994
- Gender : Male
- Father's Name : Mr. Anil Kumar Singh
- Mother's Name : Mrs. Renu Devi

- Languages Known :

Language name	Speaking	Writing	Reading
English	Excellent	Excellent	Excellent
Hindi	Excellent	Excellent	Excellent

- Hobbies : 3 D-Modeling, Aero modeling, Photography, Watching movies, Listening and Singing songs

**Declaration:**

I, hereby declare that the information stated above is complete and correct to the best of my Knowledge and belief.

GAURAV KUMAR

DATE:

PLACE: