VISHAL KUMAR JAMUAR

Roll No.:170103087
B.Tech - Mechanical Engineering
Minor in Electronics and Electrical Engineering
Indian Institute Of Technology, Guwahati

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Education

Degree/Certificate	Institute/Board	CGPA/Percentage	Year
B.Tech. Major	Indian Institute of Technology, Guwahati	8.87	2017-2021
Senior Secondary	CBSE Board	94.8%	2016
Secondary	CBSE Board	95.0%	2014

Projects

- **TOPOLOGY OPTIMIZATION OF AUTOMOTIVE STRUCTURE** *Aug'20- Ongoing*
  Dr. Sajan Kapil, Mechanical Department, IIT Guwahati
  – Significant weight reduction without compromising the stiffness of a bike frame by topologically optimizing it using CAD and CAE packages.
  – In process of writing a paper to be published in reputed Journal.
- **MOVING SUPPORT BRIDGE** *June'20- Sept'20*
  Dr. Sajan Kapil, Mechanical Department, IIT Guwahati
  – Designed a **novel** lightweight footbridge, **convertible to a ladder**, for **INDIAN ARMY** including finite element analysis of the design in a CAE package.
  – filed an Indian **Patent**.
- **REVERSE ENGINEERING USING WATER IMMERSION OF PRISMATIC OBJECT**
  Dr. Sajan Kapil, Mechanical Department, IIT Guwahati May'19- Dec'19
  – Developed a mathematical model for water based Reverse Engineering where **shape reconstruction** is done by gradually **dipping object into water in different orientation**.
  – Presented work done at **inter IIT Tech-Meet**, 2019.
- **FORMULA STUDENT RACING CAR** *April'19- Jan'20*
  SAE collegiate Club, Mechanical Department, IIT Guwahati
  – Designed **steering sub-system** of **Formula Student Car** by modifying the previous year version.
  – Designed steering report of the Formula Student Car ,describing the steering sub-system along with various simulations to present at Formula Bharat 2020.
- **IMPROVISATION OF FRICTION AND WEAR TESTING MACHINE** *Feb'20- May'20*
  Dr. Sashindra Kakoty, Mechanical Department, IIT Guwahati
  – Suggested solutions with CAD model for the current limitation of friction and wear testing machine for the **Tribology** lab at IIT Guwahati

Technical Skills

- **Programming**: Python, C
- **CAD and Simulation Tools**: SolidEdge, SolidWorks(**Certified**), MSC ADAMS, ANSYS
- **Miscellaneous**: MATLAB, Blender, Basic Manufacturing skills, Microsoft Office

Key courses taken

- **Mathematics**: Linear Algebra, Basic Calculus, ODE
- **Departmental**: Dynamics Modelling and Control of EVs, Optimization Methods in Engineering,Theory of Machine,Machine Design, Thermodynamics, Fluid Dynamics, Manufacturing Technology
- **Electronics and Electrical**: Digital Signal processing

Positions of Responsibility

- **Steering Subsystem Head,** SAE Collegiate Club, IIT Guwahati *April'19 - Jan'20*
  – Managing all steering related issues in the team, taking responsibility of proper working of steering sub-system.
  – Guiding juniors in design and development of Steering subsystem of Formula student car

Achievements

- **CSWP(Certified SolidWorks Professional) and CSWA(Associate),** Dassault Systemes *2020*
- **Change of Branch:** Awarded a change of branch based on performance in 1st year *2018*
- **1st position,** Mechanema, Technice (Tech-fest), IIT Guwahati *2019*
- **Inter-IIT Tech Meet:** Selected for presenting the research work in SAC(Conference) at Inter-IIT *2019*

Extra-Curriculars

- **Formula Bharat 2020:** Participated in this national formula student car design competition *2020*
- **Inter Hostel Cultural Competition:** Secured 1st position in Ad-Mad(performed a skit to sell a product) *2017*
- **Inter Hostel Sports Competition:** Secured 1st position in Volleyball. *2018*
- **Technothlon:** Successfully conducted this annual school championship event single handed-ly in my city. *2018*