Archit **Sharma**

4TH YEAR B.TECH · MECHANICAL ENGINEERING

402 Almaz Dreams, 1 - Bima Nagar, Indore - 452001, M.P, India

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Education

BITS (Birla Institute of Technology and Science) Pilani - Goa Campus
Goa, India

B.TECH IN MECHANICAL ENGINEERING
2019 - 2023

- Cumulative GPA: 8.15
- Research Oriented Project on 'Controller Design'
- Relevant Courses: Deep Learning, Computer-Aided Design, Numerical Techniques for Fluid Flow and Heat Transfer, Fluid Mechanics

The Shishukunj International School
Indore, India

HIGHER SECONDARY EDUCATION
2019

- 12th (AISSCE) Central Board of Secondary Education: 95%
- 10th (AISSE) Central Board of Secondary Education: 9.2
- JEE Advanced: AIR-7800

Skills

CAD and 3D Modelling	Experienced in SolidWorks, Blender, and AutoCAD
Programming Languages	Adept with C++, C, and Python; familiar with C#
Simulation and Analysis	Experienced in SolidWorks, MATLAB, Simulink, and Ansys
ML and Computer Vision	Familiar with PyTorch, TensorFlow and relevant libraries; Adept with OpenCV

Experience

Aditya Birla Insulators
Halol, India

PRACTICE SCHOOL INTERN
summer 2021

- Re-designed Railway Metal Parts on SolidWorks to decrease weight without compromising structural integrity
- Reduced weight by 20% (on average) and conducted FEM analysis using SolidWorks solver to make sure maximum stress is acceptable
- All three allotted designs have been tested and are currently in production

Damper Controller Research Oriented Project
Goa, India

PROJECT MEMBER
2021 - Present

- Pursued a project course under Dr Pravin Singru to design and implement control algorithms for Magnetorheological Dampers
- Learnt about fundamentals of linear and non-linear control systems
- Learnt about Quarter/Half-Car and Motorcycle models and created implementations for MATLAB-Simulink
- Implemented PID, LQR, Skyhook and Groundhook controllers for a Quarter-car model
- Conducted literature review on Sliding mode controllers (SMC) and implemented traditional, power reaching law & double power reaching law variants

Extracurricular Activity

3D Modelling Portfolio
Goa, India

CREATOR
2019-Present

- Published 3D models and concept designs on ArtStation (`https://www.artstation.com/hannibal_of_barca`)
- Participated in multiple challenges and competitions
- Undertook several freelance projects to evaluate myself on a professional platform

Developers' Society of BITS Goa
Goa, India

SENIOR CORE MEMBER
2019-Present

- constructed 3-D Assets of multiple projects such as SAE baja cars, campus building models, etc.
- Implemented numerical methods for rigid body motion, collisions and N-body simulations
- Learnt about meshes, shaders, and parallel computing applications through OpenGL