Varun Jindal

Third Year Undergraduate
Department of Electrical Engineering, IIT Kanpur

Email: vjindal@iitk.ac.in
Phone: +91-8176027471
Github: github.com/varun-jindal

Academic Qualifications

Year	Degree/Board	Institute	CGPA/%
2015-present	Bachelor of Technology	Indian Institute of Technology, Kanpur	7.7/10.0
2015	Class 12th/CBSE	BIPS, Patiala, Punjab	93.6%
2013	Class 10th/CBSE	BIPS, Patiala, Punjab	9.8/10

IITK Motorsports | Faculty Advisor: Dr. Santanu De & Dr. Sachin Shinde

- Designed and fabricated a formula race car for the **Formula SAE** competition - an international collegiate design challenge
- Complete **Aero** package from **scratch** in a year including:
  - **a)** Undertray
  - **b)** Nose cone
  - **c)** Front and Rear Wings (Multiple elements)
  - **d)** Side pods (Design and analysis only)
- Studied Aerodynamic properties of Formula Racing cars.
- Design optimization and **CFD** analysis (on **ANSYS Fluent**) of **Aero Devices** for our **FSAE** vehicle.
- Crafted moulds for devices with precision using **Hot wire cutter**.
- Manufactured aero package from composite **CFRP** materials (Carbon fibre and Epoxy resin matrix) using **VBM** and **Hand-laying** techniques.

Course Projects

- **Switching Robust Control for Bilateral Teleoperation** | Course Project: *Robust Control Systems* | Aug'17 – Nov'17
  Reviewed above research paper with intent to give insights to help built the prototype if desired in future.
  Physical and graphical implications of bounding systems with IQCs and simplification thus achieved for analysis of robust stability.
- **Toroid Winding Machine** | Course Project: *Manufacturing Processes-II* | Jan'17 – April'17
  Inspired from my ESO203 (Introduction to Electrical Engineering) course; it winds wire around given toroid shaped material in a tight manner.

Built complete **3D CAD** on *SolidWorks.*

- ❖ Got second consolation award for same, ranked **5th** among all **58** projects.

- **Wind Powered Water Pump** | Course Project: *Manufacturing Processes-I* | Aug'16 – Nov'16
  A robust way to harvest ground-water from wind power.
  Built complete **3D CAD** model on *SolidWorks.*

Technical Skills

- **Programming Languages :** C | C++ | Python | Git
- **Tools :** Intel Pin Tool | Gem5 | ANSYS | SolidWorks

Scholastic Acheivements

- Secured **All India Rank *594*** in IIT Joint Entrance Exam (Advanced) 2015 amongst 1,50,000 candidates.
- Awarded **KVPY Fellowship '14-'15 AIR 1383** in Basic Sciences by Indian Institute of Science (IISc), Bangalore

Relevent Courses

- **Departmental Courses :** Introduction to Electrical Engineering, Signal System & Networks, Classical/Robust Control Systems, Analog/Digital Microelectronics, Power Systems, Communication Systems, Power Electronics
- **Other Courses :** Fundamentals of Computing, Data Structures and Algorithms, Probability & Statistics, Complex Variables, Fluid Mechanics, **Computer Architecture**
- **Self Courses : Computer Organisation** (Dr. S. Raman, NPTEL), **Computer Architecture** (Prof. Onur Mutlu, Carnegie Mellon University), **3-D Memory Design** (Random resources)

Extra-Curriculars

- Broadly interested in Computer Architecture and Geometry
- Implemented an egg catching game using ICs in Electro-mania, Takneek'15.

- Part of institute Kho-Kho team Udghosh'15.
- Participated in Group Vocals in Galaxy'16 (secured 2nd prize) and Galaxy'17 (secured 1st prize).
- Security Officer, Security, Udghosh'15
- Volunteer, Mridaksh, Antaragni'15