Aryan Jani   19D100002

Mechanical Engineering   Dual Degree (B.Tech. + M.Tech.)

Indian Institute of Technology, Bombay   Gender: Male

Specialization: Computer Integrated Manufacturing   DOB: 04-10-2001

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2024	
Intermediate	CBSE	Satyamevajayate International School	2019	92.80%
Matriculation	CBSE	Ambuja Vidya Niketan	2017	10

Pursuing a **Minor** at the Department of **Systems and Controls Engineering**, IIT Bombay

SCHOLASTIC ACHIEVEMENTS

- Secured ALL INDIA Rank **1231** in **JEE -Advanced** amongst **0.2+ million aspirants**   *['19]*
- Achieved **99.90** percentile in **JEE-Mains** amongst **1.2+ million** candidates   *['19]*
- Awarded **Certificate of Merit and a Whizkid Medal** for securing ALL INDIA Rank **367** in **NCO** conducted by Science Olympiad Foundation (SOF)   *['12]*
- Awarded **Certificate of Merit** in **4th and 5th IMO** conducted by SOF   *['11,'12]*

INTERNSHIP

Product Development Intern | MesCon Solutions   *[Dec'20]*

- Exposed to **industrial products** in **pipe flow applications** such as flow control and operated over **Testing and Calibration** facility for **linear electro-pneumatic positioner**
- Conducted hands on **assembly and disassembly** of linear electro-pneumatic positioner along with video study and **modelled the device** in parts using **solid works** and studied its **control and design**

KEY PROJECTS

Parallelizing Google Page Rank algorithm | Course Project   *[Mar'21 - May'21]*

Guide: Prof. Shivasubramanian Gopalakrishnan, Department of Mechanical Engineering, IIT Bombay

- Implemented **Page Rank Algorithm** used by **Google** to rank web pages in their search engine results and used **Barabasi graphs** from python **NetworkX library** for creating real life simulation of web pages
- Parallelized the algorithm using **CUDA** computing platform by **NVIDIA** and **OpenMP** API in C++
- Achieved a comprehensive speed up of **6x** using **CUDA** and **5x** using **OpenMP** API on the algorithm

Algo Trading | FinSearch   *[June'21 - July'21]*

FinSearch - Research driven programme organised by Finance Club , IIT Bombay

- Grasped the Basics of Stock Market , Technical and Fundamental Analysis , **Futures and Options** and their Strategies , **Trading Strategies** like pairs trading from **Zerodha Varsity modules**
- Implemented **Pairs Trading strategy** after backtesting results on **data from 2013-2021** in Python

Laser Surface Hardening | Course Project   *[Feb'21 - May'21]*

Guide: Prof. Ramesh Singh, Department of Mechanical Engineering, IIT Bombay

- Collaborated in a group of 5 to **analyse**, **model** and present a research report on Laser Surface Hardening
- Paramaterised and **Simulated** the hardening process using open-source **Python package FEniCS**
- Validated the simulation results using already available experimental data for **circular lasers** on M2 Steel

XLR8 Competition   *[Aug'19 - Sep'19]*

Biggest Freshmen event organised by Electronics and Robotics Club,IITB

- Designed a **bluetooth** controlled multi-terrain bot and installed **differential mechanism** in the bot
- Built and designed a **chassis** with appropriate mechanical parameters like ground clearance, Revolutions Per Minute(RPM), power output of DC motors and **overall weight** of the bot
- Implemented **ATtiny2313A micro-controller** and **L293D** motor driver **IC** for functioning of bot

POSITIONS OF RESPONSIBILITY

Events and Design Manager | Radiance , IIT Bombay *[June'21 - Present]*
Annual Research and Technological Festival of the Department of Mechanical Engineering
- Part of a **14-member core team** responsible for ideating and executing **25+ events and workshops**
- Leading 2 tier **15+ member** team to conduct **innovative online events** based on mechanical engineering
- Aiming to promote **industry-academic interactions** with **20+ corporates** through engaging events
- Conceptualizing **lecture series, talks and panel discussion** among various fraternities like **professors, industrialists, bureaucrats, businessmen** and various student bodies from India and abroad
- Responsible for **redesigning** the **Radiance logo** and designing **posters** for various social media platforms

Sports Secretary | Hostel 3 , IIT Bombay *[Sept'20 - May'21]*
Nominated by the process of interview to meliorate sports culture in the Hostel
- Organized an incentive based intra hostel **IPL Fantasy League** competition for **250+ students**
- Successfully conducted regular tournaments and online gaming competitions which include **Call Of Duty**(COD) Team Deathmatch Competition and **Poker Night** for **healthy sports culture** in hostel

TECHNICAL PROFICIENCIES

- **Programming Languages** : C++, Python, HTML, CSS, MATLAB
- **Software Pacakages** : AutoCad, SolidWorks, Microsoft Office, LaTeX, CNC , CAMotics
- **Miscellaneous** : Simulink, , G-Code , Adobe Photoshop

COURSES UNDERTAKEN

- **Core Courses** : Thermodynamics , Solid Mechanics, Fluid Mechanics, Engineering Mechanics, Structural Materials, Engineering Graphics and Drawing, Heat Transfer*, Strength of Materials, Mechanical Measurements, Manufacturing Process, Microprocessor and Automatic Controls*
- **Interdisciplinary courses** : Signals and Feedback Systems, Linear and Nonlinear Systems*, Mathematical Structures for Control, Optimization Models*, High Performance Scientific Computing, Quantum Physics and applications, Introduction to Electrical and Electronics Circuits, Economics, Computer Programming and Utilisation, Psychology*

* - to be completed by November 2021

EXTRACURRICULAR ACTIVITIES

Sports
- Successfully completed one year of Training in **Volleyball** under **National Sports Organisation** *['19-'20]*
- Clinched **4th** position in the second **National Volleyball Championship** in under 17 age group *[Aug'16]*
- Participated in the **CBSE Cluster** in **Volleyball** sports in **under 19** age category *[Oct'16]*
- Bagged **2nd** position at distric level **Volleyball Khel Mahakumbh** *['15,'16]*
- Participated in Inter-Hostel **Volleyball General Championship (GC)** for Hostel 16 *['20]*
- Secured **3rd** position with Bronze medal at **Freshiesta** in **Volleyball** *['20]*

Miscellaneous
- Started a **Fund-raiser** for the people **severely affected by Covid-19** and raised **20,000+ INR** *['20]*
- Participated in **EnB Buzz** conducted by E-cell, IITB and did a case study and Designed a Business Model considering Strengths and Weaknesses for a local company to compete against an International rival *['20]*
- Bagged **2nd** Position in Ad Making Competitions at Freshiezza which has 500+ views on YouTube *['20]*
- Secured **International Rank 44** in level 2 of 4th BIFO organised by EduHeal Foundation *['17]*
- Secured **State Rank 20** in International English Olympiad (IEO) by EduHeal Foundation *['10]*