Ragha Abhinaya M

Junior Undergraduate, Dept. of Mechanical Engineering, IIT Kanpur

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ACADEMIC QUALIFICATIONS

Year	Degree/Certificate	Institute	CPI/%
2018 - Present	B.Tech	Indian Institute of Technology, Kanpur	8.37/10
2018	Class 12, CBSE	Chettinad Vidyashram, Chennai	97.8%
2016	Class 10, CBSE	Bharatiya Vidya Bhavan's SVV, Tirupati	10/10

ACHIEVEMENTS/AWARDS

- Secured an **All India Rank 2594** in Joint Entrance Examination (JEE) Main, **1.2 million** candidates. *(2018)*
- Stood among **School top 3** in Science, AISSCE among a total of **646** students with **489/500** marks at Chettinad Vidyashram. *(2018)*
- **Shri Pranlal Devkaran Nanjee Award for Excellence in Harmonious Behaviour**, Shikshan Bharti, **1/300** pupils. *(2016)*
- **Shri C. Subramaniam Award for Excellence in Character**, **1/600** pupils & **Kulapati KM Munshi Award in Mathematics**. *(2014)*

KEY EXPERIENCE

- **IEEE International Future Energy Challenge (IFEC) 2020, Aalborg University, Denmark** *(Nov'19- Ongoing)*
  Faculty Advisor: Dr. Sandeep Anand, Dept. of EE, IITK,
  - Represented IITK in the competition to **design power supply for nanosatellite applications** and selected as one of the **world top 10** institutions from **26 valid** proposals to reach the **penultimate step**.
  - Strategized the PCB design, as a part of a team of **14** UG students and **4** graduate advisors, under the **thermal analysis** sub-team.
  - Tailored the model using **Simscale and Finite Element Method** simulations to develop an efficient prototype with a total cost of **$110.26** and an effective total unit cost of **$49.99**.
- **Course Project: Prototype of 'The Amphibian Boat'** *(Aug'19-Nov '19)*
  Faculty: Dr. Anish Upadhyaya, Dept. of MSE, IITK
  - Awarded as the **2nd best team project** of the batch as a part of TA201: Introduction to Manufacturing Processes, IIT Kanpur.
  - Devised a CAD model using **SolidWorks** and studied different **processing materials** to develop a physical model successfully.
- **Research Project: Connectomics, Brain and Cognitive Society, IITK** *(May'20- Ongoing)*
  Mentor- Dr. Nitin Gupta, Dept. of BSBE, IIT Kanpur
  - Modelled a **neural network** to study the **stereotypic olfactory responses** in *Drosophila*, despite random connectivity (Mittal et.al.2020).
  - Generated **high correlation (0.98) and PRED (0.75) stereotypy** results between MBON responses, **disproving learning requirement.**
  - Studied **Neuroimaging** techniques, basics of **ML, Deep Learning** and prepared academic literature reviews related to Neuroscience.
- **Technical Analysis of Nifty 50, Finance and Analytics Club, IITK** *(May'20- Jul '20)*
  Mentor- Sarim Haroon, MBA, Dept. of IME, IIT Kanpur
  - Assessed past NIFTY stock data using **Pandas, Matplotlib, NumPy** etc, to model trading indicators: Bollinger Bands, MACD, SMA.
  - Identified shortcomings of **OLS regression** to model the relationship between mean return of closing prices and indicator prediction.
- **Digital Marketing Intern: Truebiz Learning Info Solutions, LLP, New Delhi** *(Jul'19- Aug '19)*
  Mentor- Mr. Kishore Kapoor, CEO, Truebiz
  - Created biweekly **sales and leadership** articles while managing **email marketing** and **tele-calling**, reaching **200+** prospective clients.
  - Designed **ad-campaigns**, **impact presentations** and social media posts to promote business while **reporting triweekly** to the mentor.

TECHNICAL SKILLS

- **Languages:** C, C++, Python, SAS Programming, SQL
- **Tools:** AutoCAD, Autodesk Inventor, SolidWorks, Simscale, MATLAB
- **Familiar:** Catia v5, Deep Learning, GNU Octave, Data Structures and Algorithms

POSITIONS OF RESPONSIBILITY

- **Coordinator, Book Club, IIT Kanpur** *(Present)*
  - Successfully discharged duties as **Secretary (2018-19)**, managing the club of **2500+** books, conducting events and handling media.
  - Responsible for handling **Operations, Finance, Media & Publicity** and leading a **14** secretary-team along with 2 other coordinators.
- **Senior Executive, Public Relations, Techkriti '20, IIT Kanpur** *(2019-20)*
  - Collaborated with an immediate **2-tier** PR team of **20+** to create robust **databasing** and ensure the delivery of **invitations and solutions**.
  - Managed single handedly, a **Junior Executive team of 7** and successfully confirmed the invitation of **3 international guests**.
  - Worked closely in **event management** with an overall team of **450+** for **2 editions** of Asia's largest Technical and Entrepreneurial fest.
- **Organiser, Montage '20, IIT Kanpur** *(Feb '20)*
  - Played a dynamic role at the core of the **Film, Art and Literature Fest** of IIT Kanpur, managing **hospitality, transport and events**.

RELEVANT COURSES

Fluid Mechanics	Thermodynamics	Linear Algebra, ODEs, PDEs
Mechanics of Solids	Nature and Properties of Materials	Complex Variables
Engineering Design and Graphics	Introduction to Electrical Engineering	Introduction to Microeconomics

EXTRA-CURRICULAR ACTIVITIES

- Attended **Inter-IIT Cultural Meet 4.0, IIT Bombay** as part of IIT Kanpur's **Literary Events** contingent which ranked **1st among 14 IITS**.
- Secured **second place** in **Basketball** during Intramurals 2018-19 at IIT Kanpur.
- Trained in **German level-A1** with **Grade A** under FLP, IIT Kanpur, 3 forms of classical dance and skilled at amateur birding.