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, Mechanical Engineering	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)*
- Awarded **Shri Pranlal Devkaran Nanjee Award for Excellence in Harmonious Behaviour**, Shikshan Bharti, **1/300** pupils. *(2016)*
- Awarded **Shri C. Subramaniam Award for Excellence in Character**, **1/600** pupils. *(2014)*
- **Kulapati K.M. 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 **2nd best team** of the batch as a part of Introduction to Manufacturing Processes, TA201.
    - 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- Prof. 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) using **MATLAB** and theoretically documented the **visual system** of *Bombus* in an attempt to steer towards connectomics.
    - 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.
    - Applied **OLS regression** analysis to model the relationship between mean return of closing prices and the indicators' prediction and identified its shortcomings.
- **Digital Marketing Intern: Truebiz Learning Info Solutions, LLP** *(Jul'19- Aug '19)*
  Mentor- Mr. Kishore Kapoor, CEO, Truebiz
    - Studied the various **employee learning services** offered and created **biweekly articles** comprehensive **'leadership and innovation'**.
    - Managed **email marketing** and **tele-calling** from creation to delivery, reaching **200+** prospective clients.
    - Designed **ad-campaigns**, **impact presentations** and social media posts to promote business while **reporting triweekly** to the mentor.
- **Course Project: 'Film and Philosophy'** *(Mar'20- April '20)*
  Faculty- Dr. Lalit Saraswat, HSS, IIT Kanpur
    - Researched and examined the philosophical aspects in film media and produced a paper 'A philosophical uptake of The Eternal Sunshine of the Spotless Mind' as a part of 'Introduction to Philosophy' (PHI141A).

TECHNICAL SKILLS

- **Programming Languages:** C, C++, LaTeX, Python
- **Data Science:** SAS Programming, SQL, Pandas, Numpy
- **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 overseeing **Finance, Operations, Media and Publicity, Events** and leading a 14 secretary-team along with 2 other coordinators.

- **Senior Executive, Public Relations, Techkriti '20** *(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 PR and hospitality with an overall team of **450+** for **2 editions** of Asia's largest Technical and Entrepreneurial fest.
- **Secretary, English Literary Society, IIT Kanpur** *(2019-20)*
  - Collaborated with the language enthusiasts through **literary discussions, poetry** and supervised the **Freshers' Night, 2019** team.
  - Attended **Cultural Meet 4.0, IIT Bombay** as part of IIT Kanpur's contingent which ranked **1st among 14 IITS** in the domain.
- **Organiser, Montage '20, IIT Kanpur** *(Feb '20)*
  - Worked at the core of the **Film, Photography, Art and Literature Festival of IIT Kanpur** managing **hospitality, transport and event scheduling.**
- **Head Girl, The Highest Chair, School Apex Body** *(2016)*
  - Spearheaded an overall student representative team of **70+**, overseeing **5 different councils** and an immediate apex body of **25 heads**.

RELEVANT COURSES

Fluid Mechanics	Linear Algebra
Thermodynamics	Ordinary and Partial Differential Equations
Mechanics of Solids	Complex Variables
Nature and Properties of Materials	Introduction to Microeconomics
Rigid Body Dynamics	Python and Statistics for Financial Analysis, Coursera
Engineering Design and Graphics	Neural Networks and Deep Learning, Coursera
SAS Programming Specialisation, Coursera	Improving Neural Networks, Coursera
Fundamentals of Computing	Introduction to Electrical Engineering

EXTRA-CURRICULAR ACTIVITIES

- Finished **German level-A1** with Grade A (88 %) under Foreign Language Program, IIT Kanpur.
- Secured **second place** in **Basketball** during Intramurals 2018-19 at IIT Kanpur.
- Trained in three forms of classical dance and skilled at amateur birding, watercolour art, writing and music.