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B.Tech. Engineering Physics
Graduated: May 2023
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Examination	University	Institute	Year	CPI
Graduation	IIT Bombay	IIT Bombay	2023	8.59

SCHOLASTIC ACHIEVEMENTS

- **Top 25 all India:** INAO | **State top 1%:** NSEA | Invited to OCSC, the final trials for **India's delegation** to the International Olympiads
- One among the **73** undergraduates selected **nationwide** for NIUS (Physics) | Recipient of the **KVPY** fellowship – All India Rank **326**

PROFESSIONAL EXPERIENCE

Tata Industries Limited (TIL) <i>[Mar'23-Jun'23]</i>	Analyst Intern Technology Investment Strategy New ventures arm of the Tata Group <u>Responsible for investment analysis and for creating plans & conducting explorations in two deep-tech sectors</u> <ul style="list-style-type: none"> ▪ Opportunity of up to INR 20M+ revenue per year: Developed a model for a Corporate Social Responsibility plan to generate additional channels of revenue for farmer communities in water-scarce regions of India ▪ Developed and shared insights into various ad-hoc techno-commercial opportunities that were presented to Tata Industries Limited (TIL) with a goal of enabling senior management in decision making ▪ Subject matter specialist: Shared working and theoretical knowledge with senior leadership to aid the development of a roadmap for the exploration of quantum computing and related quantum technologies
Co-Founder <i>[Jan'23-Jul'23]</i>	Agriphany <u>Secured a grant of INR 50K through IDEAS, IIT Bombay</u> <u>Carbon Credits via Sustainable Farming</u> <ul style="list-style-type: none"> ▪ Conceptualized a framework to generate agricultural carbon credits through negative emissions technologies ▪ Estimated savings of 50k tons of CO₂e emissions over a 3-year period and a 30% increase in farmers' income
Université Paris-Saclay <i>[May'22-Jul'22]</i>	Visiting Research Intern - Biophysics Paris, France (on-site) Director Guillaume Tresset <u>Univ. ranked 1st in Europe and 13th globally in physics</u> <u>Worked directly under a Director of Research at CNRS</u> <ul style="list-style-type: none"> ▪ Discovered correlation in viral DNA content and light absorption using a novel analysis of 10.6k+ particles ▪ Performed 3 experiments by rapidly mixing protein and RNA droplets under various ambient conditions ▪ Modelled icosahedral virus formation by analysing its kinetics data on MATLAB using Monte Carlo methods

LEADERSHIP AND ORGANISATIONAL EXPERIENCE

Head of Cabinets <i>[Feb'22-May'23]</i> <i>Team Building</i> <i>Policy Making</i> <i>Initiatives</i>	Student Mentor Program Department & Academic Verticals Supported 3.6k+ undergrads <u>Recommended by Deans to lead a 3-tier, 340+ member team</u> <u>Student Rep. (2/10k+) in IITB's ARP Committee</u> <ul style="list-style-type: none"> ▪ Supervised student heads of all departments; vetted the selection of 316 student mentors from 760+ applicants ▪ Conceptualised a 3-stage training for 440+ mentors, executed in collaboration with UK based professionals ▪ Projected 15% reduction of students in the Academic Rehabilitation Program by recommending 12 amendments ▪ Empowered 30% of the populace - low income/disabled students - by proposing a Web Accessibility Policy ▪ Led 6 Institute councils and pioneered 'Sophomore Immersion' for the offline onboarding of 1.3k+ students ▪ Acquainted 1.4k+ students across 13 departments with future opportunities by revamping 'Branch Induction'
Coordinator, Aerove <i>[Dec'19-Jan'21]</i>	Impact: Reduced 40% of the cost per drone by identifying alternatives to cost drivers of expensive components <ul style="list-style-type: none"> ▪ Secured INR 0.8 million in funds for building autonomous drones through a proposal pitched to STPC, IRCC ▪ Designed the 7-day recruit training program Enabled 30/30 beginners to build advanced ML code in 40 days
Student Mentor <i>[May'21-Jul'22]</i>	Impact: Fecilitated with the Special Recognition award (19/300+) in cognizance of extraordinary contribution <ul style="list-style-type: none"> ▪ Among the 13/550+ applicants recommended for ISMP mentoring in 3rd year Counseled 19 junior students ▪ Assisted 180+ students in career planning by organising talks Counselled 19 juniors through various challenges
Head TA <i>[Spring '22 & '23]</i>	In charge of a team of 35 teaching assistants <u>Conducted weekly tutorials & quizzes</u> <u>1st year Quantum Physics</u> <ul style="list-style-type: none"> ▪ Aided 3000+ students by producing a 50-page booklet with detailed answers to 110+ challenging problems

RESEARCH EXPERIENCE

Bachelor's Thesis <i>Prof. A Kumar</i>	<u>"Finding Zero-index Bound states in continuum by simulating photonic crystals"</u> <u>Possibility of future publication</u> <ul style="list-style-type: none"> ▪ Discovered parameters allowing 0% radiation losses in a crystal Fabricating the metamaterial at LOQM, IITB
UMIC, IITB <i>ML Subdivision</i> <i>[Sep'19-Dec'20]</i>	Only freshman to singlehandedly manage an entire subsystem - a role usually reserved for 3rd year students <ul style="list-style-type: none"> ▪ Reduced code execution time by 45x through a custom-built algorithm – attaining almost real time speeds ▪ Progress on active research problems: Developed DL code able to recognize 10-inch characters 80+ft away ▪ International Competition: Cleared primary and secondary rounds of the Barcelona Smart Drone Challenge
MELODE Labs, IITB <i>Algorithms Division</i> <i>[Oct'21-Mar'22]</i>	Reservoir Training of Liquid State Machines (LSMs) using principles of Neuromorphic Computing & Engineering <ul style="list-style-type: none"> ▪ Novel idea: Achieved 75% accuracy in simulating a brain disorder by hypothesising the underlying mechanism ▪ Analysed the working of LSMs in MATLAB by varying parameters such as synapse order & neuron quantity

EXTRACURRICULAR ACHIEVEMENTS

Dance Tournaments	▪ Head Choreographer of the institute dance team and won prizes at prestigious competitions all over India		
	Trophies	Competitions	Significance
	Winner	Group Dance: IIT Hyderabad 2021	Beat 18 teams across India
	2 nd place	Group Dance: IIT Madras 2023	Invited to choreograph for the judge
	2 nd place	Group Dance: IIM Calcutta 2020	Bested professionally trained teams
	2 nd place	Group Dance: Inter IIT 2019	One of only 4 freshmen to clear trials
	Finalist (3 occasions)	Street Battles, Group Dance - Mood! '20, '22	Knocked out 3x defending champions
IBM Hackathon	▪ 2nd place: developed a twitter monitoring AI tool Successfully pitched the app to industry leaders		