

EDUCATIONAL QUALIFICATIONS

Year	Qualification	Institute	Performance
2021-2025	B.Tech - Mechanical Engineering Minor – Eng Literature	Indian Institute of Technology Kanpur	8.0/10.0
2021	Class XII, Maharashtra State Board	Pace Junior Science College, Nerul	95.2%
2019	Class X, CBSE Board	D.A.V Public School, Nerul	94.0%

ACHIEVEMENTS

- Secured **All India Rank 2666** in JEE Advanced 2021 and **All India Rank 5044** in JEE Mains 2021 amongst **9.2 lakh candidates**2021
- Secured **All India Rank 102** in All India Open Mathematics Scholarship Examination by IPM among **50K+ candidates**2020
- Received the **Academic Excellence Award** for exceptional academic performance in the **2020-21** academic session2021
- Selected for **SMSS Lab Summer Internship 2023** from **60+ candidates** under **Dr. Bishakh Bhattacharya, HAL Chair Professor**2023

WORK EXPERIENCE

Product Development Internship | Medantrik (MedTech Start-Up)May'24-Jul'24

Received Pre-Placement Offer (PPO) for exceptional performance

Objective	Develop algorithm for portable lung health device , cost-effective spirometry test and lung exercises(₹6K vs. ₹2K/hospital test)
Strategy	Calibrated device to map RPM to breath flow rate using prototype at National Wind Tunnel IITK , informed 5+research papers Built a hospital prototype and interface, collecting 10+ datapoints from 200+ patients , boosting algorithm accuracy by 12% Integrated hospital data (SQL Server) with GLI metrics, applying RandomForest to predict ideal lung health parameters Oversaw marketing and design for health camps with 1K+ footfall and represented team for ASEAN-India ScaleHub 2024, Bali
Impact	Co-invented patent-pending device and algo, launching in Delhi-NCR(Sept) ; projected sales of 50K units ; ₹30cr revenue by Apr Classified lung health into 4 categories with 96% accuracy ; lung health report with 19 parameters/4 graphs via in-house algo

Product Management Internship | Foruppo (Autonomus Start-Up EcoSystem)May'24-Jul'24

Objective	Led and collaborate with teams to build innovative products and deliver impactful solutions, leveraging strategic planning
Highlights	Co-creator of 'Wizoona', built India's first community-led holistic education startup and worked on pre-launch activities Collaborated with core-team to analyse the Value Proposition, Customer Segmentation and GTM strategy of 'Wizoona'
Impact	Launched 'Urrban Tailor,' a SaaS platform , on Product Hunt , leading an 8-member team from product ideation to execution

CrowdFunding Internship | Muskurahat Foundation (A Youth NGO)Jan'23-Mar'23

Key Highlights	Execute crowdfunding campaigns to raise funds for children's education and the protection of child rights Impacted lives of 450+ children in Mumbai and Jharkhand, through the funds raised and received a merit certificate
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KEY PROJECT

Yoga Asana Prediction and Feedback Generation | Dr. Tushar Sandhan, EE, IIT KanpurJan'24-May'24

Objective	Enhance self-guided yoga practice with a deep learning model , classifying yoga asanas and providing real-time feedback
Strategy	Engineered hybrid CNN-LSTM model capturing spatial and temporal features, trained on 88 videos from diverse datasets Utilized OpenCV for video processing, MediaPipe for pose landmark extraction, Keras with TensorFlow for model training Conducted angular vector analyses to compare user poses with ideal poses, and implemented a feedback mechanism
Result	Reached 99.05% accuracy, boosted to 99.66% with polling, classifying videos into 6 asanas and providing effective feedback

Forecasting using time-series Analysis | Stamatics, IIT KanpurMay'23-Jul'23

Objective	Develop and compare predictive models for air quality and stock prices using time-series analysis to optimize accuracy
Strategy	Applied ADF test, ACF test, Box-Cox transformation for the stationarity, normality, homoscedasticity on 7+time series Decomposed a time-series into its trend, seasonality, cyclicity using HP filter and tested stationarity using ADF statistical test Conducted statistical normality tests and utilized ACF and PACF analysis to determine order of AR and MA models
Result	Achieved a MAPE of 0.0153 and 98.5% accuracy in predicting Apple INC. stock prices using Auto ARIMA on 1405 observations Reduces prediction errors with ARIMA, SARIMAX models , achieving 97.1% accuracy in Beijing air quality forecasting

Image processing (Course Project) | Dr. Tushar Sandhan, EE, IIT KanpurAug'23 – Nov'23

Objective	Solve 6 problem statements and execute algorithms using Numpy and OpenCV library , with the help of reference papers
Strategy	Wrote algorithm for jointbilateralfilter using reference paper and 5+ research papers for flash/no-flash image pair dataset Implemented edge detection using Canny Edge and Hough Transform , and executed segmentation with 4+ algorithms Applied masking, non-linear and spatial filters; executed contour detection, compression and multi-resolution image denoising
Result	Executed 10+ image processing algorithm with average accuracy over 86% and received an A grade

Introduction to Machine Learning (Mini Projects) | Dr. Purushottam Kar, CSE, IIT KanpurJan'24 – May'24

XORRO	Derived a linear mathematical simplification modeling a XORRO PUF with 8 multiplexers , using Khatri-Rao product Developed a linear ensemble model built from SVC and logistic regression methods, achieving highest accuracy of 99.33%
Hangman	Implemented information-theoretic algorithms greedily maximizing the number of nodes, resulting in entropy reduction Trained a 100% accurate decision tree model on a dictionary with 6K+ data points , effectively simulating Hangman gameplay
Sensor	Developed a ridge linear model calibrating the voltages recorded by the ozone and nitrogen dioxide sensors accurately Reduced the MAE by using Kernel Ridge non-linear model with an adaptive learning rate & ϵ -insensitive loss function

Brand Repositioning Strategy (Course Project) | Prof. Amit Shukla, IME, IIT KanpurMay'23-Jul'23

Objective	Redefine and strengthen boAt's brand positioning to better align with emerging markets and evolving consumer preferences
Strategy	Examined boAt's value chain and conducted competitive analysis of 4 competitors to identify the current positioning Generated insights with 4P, PESTEL, and SWOT framework and prioritised them using RICE and MoSCoW frameworks
Result	Identified new brand positioning for boAt and prepared a strategic video advertisement after analysing 80+ survey response

JP Morgan Chase Co.— Investment Banking (by Forage)Jul'24

	Analysed and provided targets for Mergers & Acquisition targets a US-based Brewing firm for expansion over a new market
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Key Highlights	<ul style="list-style-type: none">Performed Data Analysis with a summary of target based on financial statements, bidding process, estimated valuationFormulated a DCF Model to finalize the offer price to value a target based on financial forecasts and assumptions providedRevised the Model for a new bid due to change in circumstances and compared it with competitive bidder for the final price				
Chat With Multiple-PDFs (<i>Self Project</i>) <div>Aug'24</div>					
Objective	Develop contextually responsive chatbot to answer user queries, extracting and processing text from multiple PDFs				
Strategy	<ul style="list-style-type: none">Leveraged PyPDF2, LangChain, FAISS for text extraction, embedding, and retrieval, with OpenAI and Hugging Face modelsDesigned an interface with Streamlit to support file uploads, handle user queries, and responses generated by the chatbot				
Result	Achieved a 90% accuracy rate in query responses across PDF document types, processing up to 200 pages per document				
LEADERSHIP EXPERIENCE					
Coordinator, Dance Club (KOS) IIT Kanpur <div>May'23 – May'24</div>					
Felicitated with Certificate of Appreciation by the Director, IIT-K for recognition as Coordinator, Dance Club, IIT Kanpur					
Leadership	<ul style="list-style-type: none">Directed a 3-tier team of 50+ in 4 national-level competitions and coordinated 7 campus events with 2K+ average footfallManaged club finances of INR 1.2L and generated over INR 30K in additional revenue by organizing diverse workshops				
Initiatives	<ul style="list-style-type: none">Organized 7-day Summer Workshop series by tier-1 artist separately in two shifts for 50+ beginners and 30+ team membersCrafted a dynamic 10-minute showcase at the PG Orientation that successfully drew 1.8x more PG students in the Club				
Impact	<ul style="list-style-type: none">Achieved a historic milestone by becoming the 1st dance team from any IIT to qualify for Indian HipHop Championship finalsGarnered over 12 million+ views and amassed an impressive 40K+ subscriber base on the official Dance Club, IITK YT channel				
RELEVANT COURSES					
Image processing		Marketing Management	Integrated Product Development - I (<i>ongoing</i>)		
Introduction to Machine Learning		Linear Algebra and ODE	Partial Differential Equations		
TECHNICAL SKILLS					
<ul style="list-style-type: none">Programming Languages: C++, Python, HTML, CSS, LaTeX, SQLSoftware & Utilities: Fusion360, Adobe Illustrator, Adobe Photoshop, Adobe LightRoom, Microsoft Excel, CanvaData Science & ML: TensorFlow, Keras, NumPy, Pandas, Matplotlib, Scikit-learn, Statsmodels, OpenCV, LangChain, Streamlit					
EXTRA-CURRICULAR ACTIVITIES					
Category	Competition	Achievements		Level	Year
Performing Arts: Dance	Inter-IIT Cultural Meet	<i>Led the contingent which secured,</i> <ul style="list-style-type: none">3rd position in dance battle category at IIT Madras3rd position in group dance category at IIT Madras		Inter-IIT	2023
	Antaragni, IIT Kanpur	<ul style="list-style-type: none">2nd position out of 30+ teams in group dance category2nd position out of 30+ teams in dance drama category		National	2023
	Antaragni, IIT Kanpur	<ul style="list-style-type: none">1st position out of 30+ teams in group dance category1st position out of 30+ teams in dance drama category3rd position out of 10+ teams in dance battle category		National	2022
	Thomso, IIT Roorkee	<ul style="list-style-type: none">3rd position out of 30+ teams in dance drama category		National	2022
Social Work	<ul style="list-style-type: none">Tutored 20 underprivileged children in Math and English of class 5th and 6th through Prayas, IITKMobilized funds to support children's education at Muskurahat Foundation (NGO) earning a merit certificateConducted Flashmob with sapling distribution on World Environment Day to spread environmental awareness				2022
Networking	Campus Ambassador at Acmegrade(E-Learning platform) : Led 6+ successful campaigns , gaining 100+ clients				2022-23
Managerial	<ul style="list-style-type: none">Senior Executive (Hospitality), Techkriti - Lead a team of 50+ Junior Executives and conducted exuberant eventsSecretary, Dance Club: Choreographed dance sequence for 35 freshers and managed 80+ performances at DE'23				2022