

EDUCATIONAL QUALIFICATIONS

Year	Qualification	Institute	Performance
2021-2025	B.Tech - Mechanical Engineering Minor – English 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%

SCHOLASTIC 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

WORK EXPERIENCE

Product Development Internship | Medantrik (MedTech Start-Up)Jun'24-Aug'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)
Execution	• 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 Random Forest to predict ideal lung health parameters
Impact	• Co-invented patent-pending device ; projected sales of ₹30cr revenue (50K units) by Apr, launch expected; Sept (Delhi-NCR) • Generated lung report (19 parameters+4 graphs) via proprietary algo, classifying lung health into 4 categories (96% accuracy)

Product Management Internship | Foruppo (Autonomous Start-Up Ecosystem)May'24-Jun'24

Product 1: Wizoona (Co-creator)	• Pioneered India's 1st community-led holistic education startup to empower young adults with comprehensive life education • Crafted value proposition, customer segmentation, GTM strategy of 'Wizoona' ensuring customer acquisition and retention
Product 2: Urrban Tailor	• Led Urrban Tailor's (personalized outfit selector) development, concept to Product Hunt launch, managing an 8-member team • Developed a dynamic selection framework across 5 dimensions on WordPress , enhancing user interaction and personalization

RELEVANT PROJECTS

Yoga Pose Prediction and Feedback Generation | Dr. Tushar Sandhan, EE, IIT Kanpur📧Jan'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
Outcome	• 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 Kanpur📧May'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, ACF test, Box-Cox transformation for the stationarity, normality, homoscedasticity on 7+time series datasets • Decomposed time-series into trend, seasonality, cyclicity using HP filter ; analyzed AR/MA orders using PACF, normality tests
Outcome	• 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

Introduction to Machine Learning (Course 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

Chat With Multiple-PDFs (Self Project)📧Aug'24

Objective	• Develop contextually responsive chatbot to answer user queries, extracting and processing text from multiple PDFs
Strategy	• Leveraged PyPDF2, LangChain, FAISS for text extraction, embedding, and retrieval, with OpenAI and Hugging Face models • Designed an interface with Streamlit to support file uploads, handle user queries, and responses generated by the chatbot
Outcome	• 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 KanpurMay'23 – May'24

Felicitated with Certificate of Appreciation by the **Director, IIT-K** for recognition as Coordinator, Dance Club, IIT Kanpur

Leadership	• Directed a 3-tier team of 50+ in 4 national-level competitions and coordinated 7 campus events with 2K+ average footfall • Managed club finances of INR 1.2L and generated over INR 30K in additional revenue by organizing diverse workshops
Initiatives	• Organized a 7-day Summer Workshop series by tier-1 artist separately in two shifts for 50+ beginners and 30+ team members • Crafted a dynamic 10-minute showcase at the PG Orientation that successfully drew 1.8x more PG students in the club
Impact	• Achieved a historic milestone by becoming the 1st dance team from any IIT to qualify for Indian HipHop Championship finals • Garnered over 12 million+ views and amassed an impressive 40K+ subscriber base on the official Dance Club, IITK YT channel

TECHNICAL SKILLS

- **Programming Languages:** C++, Python, HTML, CSS, LaTeX, SQL
- **Software & Utilities:** Illustrator, Photoshop, LightRoom, Excel, Canva
- **Data Science & ML:** TensorFlow, Keras, NumPy, Pandas, Matplotlib, Scikit-learn, Statsmodels, OpenCV, LangChain, Streamlit

EXTRA-CURRICULAR ACTIVITIES

Performing Arts	Inter-IIT Cult Meet	• 3rd position in group dance category	• 3rd position in dance battle category	Inter-IIT	2023
	Antaragni, IITK	• 1st position in group dance category	• 1st position in dance drama category	National	2023
Social Work	• Tutored 20 underprivileged children in Math and English of class 5th and 6th through Prayas, IITK • Mobilized funds to support children's education at Muskurahat Foundation (NGO) earning a merit certificate				2022

