KAUSTAV DASGUPTA

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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 session — *2021*

WORK EXPERIENCE

Product Development Intern | *Medantrik (MedTech Start-Up)* — *Jun'24-Aug'24*

Received Pre-Placement Offer (PPO) for exceptional performance

Objective	• Engineer cost-effective **portable lung diagnosis device**, driving technical solutions with **CTO** for successful market launch
Approach	• 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%** • Spearheaded **end-to-end design** of health camps with **1K+ footfall** and **represented team** in **ASEAN-India ScaleHub 2024, Bali**
Impact	• Co-invented patent-pending device; projected sales of **₹30cr revenue (50K units)** by Apr, launch expected by **Sept** (Delhi-NCR) • Generated lung report **(19 parameters+4 graphs)** via proprietary algo, classifying lung health into **4 categories (96% accuracy)**

Product Management Intern | *Foruppo (Autonomus 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

KEY PROJECTS

Yoga Asana 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
Result	• Classified videos into **6 asanas**, achieving a framewise accuracy of **99.05%**, with polling improving accuracy to **99.66%** • Enabled **precise feedback** by demonstrating the closest intermediate poses from input videos; comparing them to ideal poses

Brand Repositioning Strategy *(Course Project)* | *Prof. Amit Shukla, IME, IIT Kanpur* 🔗 — *May'24-Jul'24*

Objective	• Redefine and strengthen **boAt's brand positioning** to better align with emerging markets and evolving consumer preferences
Strategy	• Analyzed boAt's value chain; identified **5 key levers** to drive business growth amidst **3 rivals** dominating **50% market share** • Generated insights with **4P, PESTEL, and SWOT** framework and prioritised them using **RICE** and **MoSCoW** frameworks
Outcome	• Crafted strategic **video advertisement** that elevated brand perception, validated through insights from **80+ survey responses** • Formulated a **brand extension** concept for boAt, launching a **musical instrument product line** to target adjacent markets

Machine Learning Mini Projects | *Dr. Purushottam Kar, CSE, IIT Kanpur* — *Jan'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

LEADERSHIP EXPERIENCE

Coordinator, Dance Club (KOS) | *IIT Kanpur* — *May'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**

EXTRA-CURRICULAR ACTIVITIES

Category	Competition	Achievements	Level	Year
Performing Arts: Dance	**Inter-IIT Cultural Meet**	*Led the contingent which secured,* • **3rd position** in group dance category at IIT Madras • **3rd position** in dance battle category at IIT Madras	**Inter-IIT**	2023
	Antaragni, IIT Kanpur	• **2nd position** out of **30+** teams in group dance category	**National**	2023
		• **1st position** out of **30+** teams in group dance category		2022
		• **3rd position** out of **10+** teams in dance battle category		
	Thomso, IIT Roorkee	• **3rd position** out of **30+** teams in group dance category	**National**	2022
Social Work		• Mobilized funds to support children's education at **Muskurahat Foundation (NGO)** earning a **merit certificate**		2022
		• Tutored **20 underprivileged children** in Math and English of class 5th and 6th through **Prayas, IIT Kanpur**		
		• Conducted **Flashmob** with sapling distribution on **World Environment Day** to spread environmental awareness		2023