Satyansha Dev
Final Year Undergraduate — Department of Electrical Engineering

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ACADEMIC QUALIFICATIONS

Year	Degree/Certificate	Institute	CPI / %
2020 - Present	B.Tech	Electrical Engineering, IIT Kanpur	7.1/10.0
2020	CBSE(XII)	Milton Public School, Agra	88.2%
2018	CBSE(X)	Saraswati Vidya Mandir, Etah	97.4%

SCHOLASTIC ACHIEVEMENTS

- Secured Category **Rank 719** in **JEE Advanced '20** (1.6L+ candidates) and **Rank 1643** in **JEE Mains '20** (10.23L+ candidates)
- Achieved Category **Rank 34** and **Girls Rank 7** (top 99.9 percentile) in the **State level UPSEE 2020** exam out of 0.75L+ candidates
- Received the **Academic Recognition Award** for School **Rank 1** and **District Rank 5** in X Standard, with an impressive 97.4% score
- Successfully completed **5+ projects** in **data mining** & **machine learning** domain, analysing data and performing customer analysis

PROFESSIONAL EXPERIENCE

Machine Learning Research Internship | Bosch Global Software Technologies   *[May'23 - Jul'23]*

Objective	• Utilize **Generative Adversarial Networks** (GANs) to generate data for **simulation** and **training of AI-driven systems**
Strategy	• Explored **unsupervised learning**, neural nets, reinforcement learning, feature engineering and **data imputation** in **ML** • Implemented CGAN, WGAN, DCGAN on Cifar-10, MNIST & other datasets, achieving **accuracy rates exceeding 90%** • Scrutinized a GAN-focused paper, interpreting **10+ datasets**, exploring discrete/continuous models & **NRGAN** variants
Impact	• Implemented 'Data-Driven Modelling of Noise' using CGANs for **band thermal** & **shot noise** using **STFT** representation • Applied GANs to **30+ datasets**, showcasing their potential to generate intricate noise patterns via data-driven models • Identified **future areas of research** in GANs including stability, output diversity, evaluation methods & privacy risks

KEY PROJECTS

SURGE - Wind Power Prediction using Machine Learning Algorithms | IIT Kanpur | 🌐   *[Dec'21 - Jul'22]*

Mentor: Prof. M.V.Gururaj, Department of Electrical Engineering, IIT Kanpur | * *research paper to be published*

Objective	• Develop model to **forecast** wind power generation for **power system reliability** through supply-demand equilibrium
Approach	• Conducted thorough **analysis** of datasets to identify **critical parameters** of wind, discerning their influence on output • Studied the various data cleaning and **preprocessing** techniques to analyze datasets and **correlation** in attributes • Applied various **ensemble methods** (Random Forest, Gradient Boosting) & **ANN** to build models with **91% accuracy**

Analysis of Institutional features of a Business Corporations | Course: Introduction to Corporations | 🌐   *[Jan'23 - Mar'23]*

Mentor: Prof. Rahul Verman, Department of Industrial and Management Engineering, IIT Kanpur

Objective	• Explored various **institutional features** of a business corporation including **corporate responsibility, corporate viel**
Approach	• Studied about the **market versus state** debate of organization by taking cases such as Bhopal Gas Leak & Vodafone • Researched the aspects of corporations, governance & laws, **policy implications** & **consequences** for stakeholders • Performed detailed analysis of **Shell Companies** using DHFL, Tiger Global & GST fraud cases, and Business laws

IPO Analysis using Forward Looking Statements | Finance Club, IIT Kanpur | 🌐   *[May'22 - Jul'22]*

Objective	• Analyze and grade an **Initial Public Offering** based on **Forward-Looking Statements** and **fundamental analysis**
Approach	• Developed a thorough understanding of **valuation, leverage, liquidity ratios** and their utilities in fundamental analysis • Deployed **Tone Analysis** to capture IPO-related sentiments expressed in forward-looking statements of firm's DRHP • Leveraged **web scraping** to extract the IPO details from multiple financial websites and arrive at suitable **valuation**

POSITION OF RESPONSIBILITY

Assistant Coordinator | Institute Counselling Service, IIT Kanpur   *[Apr'22- May'23]*

Leadership	• Led a **3-tier team** of 20 Members, **450+** Student Guides & Mentors, in a **10-day long Orientation** for 1200+ freshers • Managing a **budget of ₹33L+** to provide emotional, academic as well as financial support to the student community • Conducted "**Hakuna Matata**" event with footfall of **8000+ students** on Diwali, fostering **"Home away from Home"**
Initiative	• **Established** a new **Web division** & **Creative division** within the team structure, managing 3-tier team of 12 members • Collaborated with SPIF for seminars and **Suicide Prevention Gatekeeper Training Program** for students & faculties • Introduced **Sex Education** & **Sexual Diversity sessions** as part of the Orientation, aimed at increasing awareness
Impact	• Guided **100+ students** to move out of **Academic Probation** & **Warning** through consistent mentorship and guidance • Facilitated over **3000+ counselling sessions**, collaborating with counselors for comprehensive student support • Accelerated Instagram & Facebook reach by **344%**, **2X followers growth** & observed **200% jump** in impressions

EXTRA-CURRICULAR ACTIVITIES

Mentorship Endeavours	**UnchaAi** | JEE Mentor *[Jan'21 - Aug'21]* • **Paid Tutor** in UnchaAi, a tech-ed startup by IITK & NITP alumni, **providing mentorship platform** to JEE aspirants • Mentored aspirants with PCM doubts, **designed customized** timetables, metrics to track performance periodically
Managerial Operations	• **Co-founded** the **Health & Hygiene Wing, CWC** for health awareness, hygiene, and to promote sexual wellness talks • **Year-long** active teacher in Prayas, CWC to **educate marginalized kids**, promoting the notion of **'Education for All'** • Assisted **Raktarpan** in conducting **3 Blood Donation camps (800+ donations)** in collaboration with **Bloodconnect** • Worked in a 4-tier team of **100+ Election Officers**, to ensure smooth conduction of the biggest Students' Elections
Cultural Activities	• Achieved **1st position** in competition "Tasweer Azadi Ki" by Amar Ujala Newspaper, celebrating Independence Day • Awarded the "Dr. Achint Mathur Smriti Award" for **outstanding dance performance** in **40th Little Ipta Camp**, 2015 • Organized **workshops** of art techniques like coffee painting, calligraphy and origami as Secretary, **Fine Arts Club**