Tushar Verma

Final Year Undergraduate
Department of Chemical Engineering
Indian Institute of Technology Kanpur

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Education

Year	Qualification	School/Institution	CPI/%
2022-Present	B.Tech	Indian Institute of Technology Kanpur	7.5/10
2022	CBSE XII	Satluj Public School, Sirsa, Haryana	93%
2020	CBSE X	Satluj Public School, Sirsa, Haryana	94%

Scholastic Achievements

- Awarded the **Merit-cum-Means Scholarship** by **IIT Kanpur** annually since **2023**, given to the **top 1%** meritorious students.
- Secured **All India Rank 3985** in **JEE Main 2022** conducted by National Testing Agency, amongst **1.5M** appeared participants.
- Secured **All India Rank 7673** in **JEE Advanced 2022** conducted by IIT Bombay, amongst **0.5M** shortlisted candidates.
- Received **Silver Honor (Top 7%)** in the **International Youth Math Challenge 2020** among **6,500+** global participants.

Work Experience

Product and Strategy Intern *Aug'24 - May'25*
HealthQuant Pvt. Ltd. | Startup, IIT Kanpur

- Contributed to **successful fundraising** exceeding **INR 20L** by preparing **investor pitch decks** and **market-facing materials** for stakeholder engagement.
- Collaborated with **co-founders** to refine **business strategy**, driving **investor outreach** for sustainable growth.
- Designed **UI prototypes** and **digital assets** that increased pre-launch **client engagement** by over **30%**, supporting strategy for upcoming **product launches**.
- Supported establishing **key strategic connections** with the **Ex-Head of Abbott India**, now serving as an **advisor** and on the **Cap Table**.

Publication

Neutron Emission During D_2O Electrolysis *May'25*
Ankit Kumar, ***Tushar Verma***, Pankaj Jain, et al. | NETP Lab
DOI: 10.13140/RG.2.2.32604.50565 | Preprint

- Engineered and calibrated a custom **neutron detection system**, enhancing detection **efficiency** by **115%** and minimizing errors.
- Designed and executed **25+ experimental protocols** to investigate neutron emission under varied **electrolysis conditions**.
- Conducted **statistical analysis** on neutron data using **Origin** and **ImageJ**, correlating with microscopy to validate emissions.

Key Projects

Lexora: Legal Advice Platform ▶ *Jun'25 - ongoing*
Self Project | IIT Kanpur

- Defined the **product vision** for a **mobile-first platform** to bridge the market gap between legal questions and expert advice, creating a trusted, **community-driven ecosystem**.
- Architected the **end-to-end user journey**, mapping out streamlined **user flows** and a clear **information architecture** to build a foundation of user trust and accessibility.
- Designed a clean, **user-centric UI** with a minimalist aesthetic, implementing a **client-side caching** strategy and features like light/dark modes to ensure a seamless, performant experience.
- Prioritized the **real-time community feed** as the primary **engagement engine**, engineering a compelling **feedback loop** with an **upvote/downvote system** to drive user retention.

Visual Data Forecaster *Aug'25 - ongoing*
Self Project | Dashboard

- Developed a dynamic and **interactive web application** from scratch, using **vanilla JavaScript**, HTML5, and CSS3 to perform **time-series analysis** and visualize predictive trends.
- Implemented a versatile forecasting engine featuring multiple **statistical models**, including **Linear Regression**, **Polynomial Regression**, and **Double Exponential Smoothing**.
- Engineered a **fully responsive** and intuitive **user interface** with **Tailwind CSS**, featuring a **data exploration dashboard** with dynamic charts powered by **Chart.js**.
- Integrated analytical features, including **automated model insights** and **statistical confidence intervals**, to empower users with reliable, **data-driven decision-making** capabilities.

Computer Graphics Project *Aug'25 - ongoing*
Self Project | IIT Kanpur

- Engineered a dynamic **2D animated scene** from scratch using **WebGL** and **JavaScript**, implementing **linear algebra** concepts like **affine transformations** for object kinematics.
- Architected the renderer with **modular JavaScript functions** for **three distinct rendering modes** (Solid, Wireframe, Point), ensuring code reusability and maintainability.
- Designed **scalable architecture** prepared for future enhancements, including **3D scene transitions**, dynamic **lighting models**, and interactive **camera controls**.

Virtual Chemical Industry *Mar'24 - Apr'24*
Course project: ChE261 | Prof. Raghavendra Ragipani

- Conducted a **comprehensive market opportunity analysis** to identify high-value specialty chemicals, assessing the competitive landscape and evaluating its potential for market entry.
- Developed a **robust prioritization framework** based on business metrics, including **profitability**, **supply chain availability**, and **safety**, to **systematically** screen candidate products.
- Made a **data-driven decision** by synthesizing insights from government reports, industry databases, and import/export data, selecting **Aspartame** as the target product for development.

Graphics and Shaders: 3D Renderer *Jun'23 - Aug'23*
Game Development Club | IIT Kanpur

- Worked with a team of 7 fellow-mates and 2 mentors to develop a **3D renderer** using **computer graphics** and **shaders**.
- Gained hands-on experience with **C++**, **C**, **CMake** for **cross-platform build automation**, and **OpenGL**.
- Implemented a **custom fragment shader** that enhanced **visual quality** and optimized the **real-time rendering pipeline**.

Key Skills

- **Programming:** Python, HTML, CSS, Js, Dart, MATLAB, Git
- **Technical:** Manim, A/B Testing, Wireframing & Prototyping
- **Design:** Figma, Adobe Creative Suite, Canva, Blender, Spline.

Positions of Responsibility

Member, Finance Committee *Aug'24 - Apr'25*
- Elected by **75+** Senate panel to the **4-member** Gymkhana F.C.
- Managed an **INR 2Cr+** budget and revised financial policies, achieving a **50% reduction** in unnecessary expenditures.

Organiser, Udghosh'23 *Jul'23 - Dec'23*
- Designed **digital/print media**, **website/app UI/UX**, and **marketing collateral**, ensuring a **cohesive brand experience** with **Figma** and the **Adobe Creative Suite**.

Secretary: Design and Animation Club *Jun'23 - Mar'24*
- **Organized** multiple online and offline **design competitions**, **marathons**, **workshops** and fun events like Treasure Hunt.

Extracurricular

- Mentored **20+ mentees** in Creating VR World using Blender, project offered by DesCon society, IITK.
- Organised multiple **Archery workshops** & **Competitions** as Archery Society secretary with **100+** participants.