

Vikash Meghwal

4th Year Undergraduate

Dual degree: Bachelors-Masters in Chemistry

Indian Institute of Technology, Kanpur

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Educational Qualifications

Year	Degree/Certificate	Institute	CPI/%
2019 - Present	B.S-M.S (Chemistry)	Indian Institute of Technology, Kanpur U.P.	7.2/10.0
2018	CBSE-XII	Lawrence and Mayo Public School, Ajmer Raj.	71.8%
2016	JKBOSE-X	Bharti Public High School, Jammu and Kashmir	82.8%

Undergraduate Research Project

Supervisor: Dr. Nagma Praveen Research Group, Chemical Biology (Bio-Nanoparticle Lab), Dept. of Chemistry, IIT Kanpur | *Lab Project* **G** Lab-Members Jan-May'22

Objective: -Studying the SARS-CoV-2 fusion in detail using an opportunistic model for the fusing of the coronavirus membrane. -Receptor binding and priming of the spike protein of SARS-CoV-2 for membrane fusion.

Future Work: - To create medicines for human consumption and vaccines to combat infections and disease. And use this knowledge to create nanoparticle medicines and create enough adoptable vaccines.

Learning from lab: -Viruses and Binding fusing in SARS-MERS Covid

GDC FieldOps Fellowship

National programme | *Online Project*

G Link June'22

CoronaSafe Network is a free and open-source disaster management system that is used by National Health Mission, Government of India and various state governments for reimaging digital war rooms. The solution that students got an opportunity to intern with has supported 3.34*Lac patient management and 1.29* Lac ambulance shiftings and is approved by the United Nations as a Digital Public Good.

Technical Skills

Languages: Python, C/C++, JavaScript, HTML/CSS, \LaTeX , XML, Markdown

Frameworks: Electron, React, Node.js, Angular, Salesforce

Developer Tools: Git, VS Code, Visual Studio, Jekyll, Gems, Sublime Text Editor, Jupiter

Android Development: Android Studio, Flutter, Kotlin

Operating System/ Terminal: Knowledge of Unix/Linux or Windows environments and APIs, CMD, Power Shell

Other: Fusion360, PowerPoint, Adobe PhotoShop, MS-word, Adobe Illustrator, AutoCade, Overleaf

Participation: Advances in Spectroscopy, Catalysis, and Synthesis Online Event from Indian Institute of Technology Kanpur during the summers of 2021.

Research Interest

Bio Inorganic, Physical Chemistry, Experimental Studies, Drug Delivery, Polymers, Inorganic Chemistry, Genetic Material Nanotechnology and Nano-particles, Spectroscopy, Pericyclic Reaction, Asymmetric Synthesis, Viruses, Nanoparticles and the Industrial Production of Perfumes and Fragrances.

Relevant Courses

Basic Physical Chemistry A	Physical Chemistry B	Basic Inorganic Chemistry A
Bio-Electricity A	Inorganic Chemistry A	Physical Photo-Chemistry B
Introduction To Economics B	Elements of Visual Representation	Psychology Of Wellbeing
Thermodynamics	C Programming	Intro. To Electronics
Basic Organic Chemistry (I & II) and General Chemistry	Linear Algebra and Ordinary Differential Equation	Technical Arts (Manufacturing Process I/II) 201-202

Achievements

Secured a rank in JEE Advanced 2019 among 2,40,000 JEE Main qualified aspirants.

Part of the **1%** of students chosen from **1 million applicants** for admission to India's premier educational institutions, the **IITs**.

Self Project

- Personal-Website: - Angular (Web framework), Electron Js, and web development tools were used. **G Project**
- Using Android-studio, I created a Server and Client application that enables in the storage of data on the GoogleFire-base Framework. **G Server G Client**
- Using Electron Js, I created a desktop application that assists students in managing academic data. I also used HTML, CSS, and Java-script in the frontend and backend of the application. **G Electron**
- Using Flutter, I created a Bills Paying Calculator in the restaurant, which also facilitates in tipping.
- I created a Telegram and Whatsapp Chatting bot on Replit.

Honors and Awards

It's a Science Exhibition in January 2016. Hydraulic Pressure is the project's name. (2015) I won first place in the District Level Exhibit. Then I was chosen for a state-level science project. And then went to Kashmir (Bemina, Srinagar) for a state-level project, for which I received a cash reward bonus from the government.

Extra Curricular

- **Volunteer — Ritambhara — Antaragni, IIT Kanpur 2019:** • Assist the Senior Secretary in organising an event while Antaragni, Pearl Academy Delhi, and other team members visit the campus. Volunteered for the Hospitality wing of Antaragni-IIT Kanpur's annual cultural fest, where nearly 600+ participants must be accommodated in various hostels.
- **Secretary — Ritambhara — Antaragni, IIT Kanpur July'20 - Oct'20:** • Prepared a database of various fashion giants and contacted them and convinced them to sponsor our event. • Contacted various colleges and their fashion societies and increased the participation in the event.
- **Senior Secretary Chess Club — IIT Kanpur April'20 - April'21:** • Organizes chess tournaments for the campus community. • Conducted various Events on Lichess
- **Techkriti RoboGames Senior Executive IIT Kanpur 2020-21:** • Prepared a database of various Colleges and contact them as well as convinced them to Participate in the RoboGames —RoboCaAD— Manoeuvre using abstract calling.
- **Council Secretary Exhibition— IIT Kanpur 2021-22:** • Responsibility for Exhibition Planning and Execution

Project Work

- **Cantilever ToolBox:** Dr. Anish Upadhyaya is the COURSE INSTRUCTOR for TA201-P. Dr. Anil Kumar Verma, LAB IN CHARGE COURSE-IN-CHARGE Anish Upadhyaya, M.D. Dr. Amarendra K Singh is a tutor. We worked on the manufacturing process, as well as designing the structure and components of the ToolBox. We have 9 members in our team. I also created a 3D model of the box in the Fusion360 Designing Tool, and I finalised the cost of the manufacturing process with two other members. It was a group effort.

Hobbies and Interest

Yoga, Gaming, Long Jump, Cooking, Painting, Plaster of Paris based models and Craftwork, Reading Books

Declaration

I do hereby declare that all the details furnished above are true to the best of my knowledge and belief.

Place: IIT Kanpur, Uttar Pradesh (India)

(Vikash Meghwal)

Date: 11th Dec, 2022