Abhishek Gupta

THIRD YEAR UNDERGRADUATE · DEPARTMENT OF CHEMISTRY

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Academic Qualification

Year	Degree	Institute	CPI/%
2015 - 2019	B.S.	Indian Institute Of Technology, Kanpur	7.34/10.0
2015	CBSE	Jain Bharti Mrigavati Vidyalaya	92.2%
2013	CBSE	Jain Bharti Mrigavati Vidyalaya	9.6/10

Honors & Awards

2017	**2nd runners-up**, Techkriti Innovation Challenge in Techkriti '17 (annual international, technological festival).	*IIT Kanpur*
2016	**Silver Medal**, Hardware Competition in Inter IIT Tech Meet (annual technological competition).	*IIT Mandi*
2016	**1st Place**, Techkriti Innovation Challenge in Techkriti '16 (technical international annual fest).	*IIT Kanpur*
2016	**Best Summer Project**, Project HUmanoid RObot (HURO), built a wheeled humanoid under Robotics Club.	*IIT Kanpur*
2016	**Special Mention**, Windows Game Project in Summers '16 under Science and Technology Council.	*IIT Kanpur*
2015	**Recipient**, INSPIRE Scholarship by Department of Science and Technology for attraction of talent to Science.	*India*
2015	**Top 4%**, Joint Entrance Exam (All India Engineering Entrance Examination) among 150,000 candidates.	*India*
2014	**Rank 1**, Class topper in 8th Science Olympiad Foundation (SOF), International Mathematics Olympiad.	*New Delhi*
2013	**2nd Position**, One Act Play at zonal level organized by Delhi School Sports and Activities Board.	*New Delhi*

Projects

Insect Olfaction — *IIT Kanpur*

RESEARCH PROJECT, PROF. NITIN GUPTA — *May 2017 - Present*

- Understanding brain mechanisms that govern how specific smells become attractive or repulsive to mosquitoes.
- Collecting and analyzing some of the precious data on behavior, single sensillum recording (S.S.R.) and electroantennography.

DNA Damage Response of Mycobacterium Tuberculosis — *IIT Kanpur*

RESEARCH PROJECT, PROF. SARAVANAN MATHESHWARAN — *May 2017 - July 2017*

- Worked on understanding the SOS response which activates in response to the damage conditions in M. Tuberculosis.
- Primer designing, Polymerase Chain Reaction (PCR), Transformation, Plasmid Isolation, Digestion, Ligation were performed.

Phage Therapy against Staphylococcus aureus — *IIT Kanpur*

RESEARCH PROJECT, PROF. SARAVANAN MATHESHWARAN — *Dec. 2016 - May 2017*

- Learned basic lab techniques (like: Protein purification, Gel Electrophoresis, Culture formation, Reagents preparation etc.).
- Collected soil and water samples from the Ganges in Bithoor and worked on isolation.

Automatic Lift Arm Sorter — *IIT Kanpur*

COURSE PROJECT, PROF. SHASHANK SHEKHAR — *Jan. 2017 - May 2017*

- Implemented a model that was able to sort iron blocks with different size.

Humanoid Robot (HURO) — *IIT Kanpur*

ROBOTICS CLUB PROJECT, SCIENCE AND TECHNOLOGY COUNCIL — *Sep. 2015 - May 2017*

- Designed various improved models of Humanoid and simulated them in Virtual Experimentation Platform (V-REP) .
- Used Pywikibot library, Speech Recognition, Natural Language Processing and Wolfram Alpha API for Chatbot implementation.

Sign Language and Communication (SL-COM) — *IIT Kanpur*

HARDWARE PROJECT, ROBOTICS CLUB PROJECT — *Feb. 2016 - Mar. 2017*

- Project aimed to lower the barrier of communication for dumb and deaf people by developing a portable electronic device.
- Assembled wearable flex sensor gloves with bluetooth connectivity to a chat application.

Transportation Mechanism — *IIT Kanpur*

COURSE PROJECT, PROF. NEERAJ SINHA — *Aug. 2017 - Nov. 2017*

- Manufactured the model that stack the transported work pieces by taking advantage of gravity.

Air War Window's Game — *IIT Kanpur*

PROGRAMMING CLUB PROJECT, SCIENCE AND TECHNOLOGY COUNCIL — *May 2016 - July 2016*

- An air combat shooter game with stunning graphics alongside great audio effects built on Unity3D Engine.

Position of Responsibility

Dean of Undergraduate Committee Student Nominee
IIT Kanpur

Academic & Research Cell *Sep. 2017 - Present*

- Elected as one of the two student nominees from the entire department for the Department Undergraduate Committee (DUGC), consisting of professors from the Department of Chemistry.
- Played a pivotal role in establishing policies for Undergraduate courses in department and taking decisions in critical matters like course re-structuring, changes in template, student appeals, criteria etc.

Secretary
IIT Kanpur

Robotics Club *Aug. 2016 - Apr. 2017*

- Organized Takneek'16 competitions, designed the arena of problem statements.
- Mentor of Arduino Based LED Table (ARBALT) team in Winter Camp 16, helped in designing the circuit using Multiplexer (MUX).

Senior Executive of Web Development
IIT Kanpur

Techkriti 17 *Oct. 2016 - Mar. 2017*

- Responsible for developing the sub-pages and editing main and beta version of Techkriti web page.
- Worked on debugging JavaScript, HTML, and Cascading Style Sheets (CSS) related issues on live website.

Senior Member
IIT Kanpur

Team HURO *Aug. 2016 - Apr. 2017*

- Assigned small projects and conducted workshops and lectures for new members of the team.
- Mentor of Battery Management System(BMS) and Chat-Bot sub-teams, introduced the approach to proceed for our goal.

Skills

Programming:	C, C++, Python, Matlab, Lua.
Web:	HTML, CSS, JavaScript.
Operating Systems:	Gentoo Linux, Ubuntu, Kali.
Tools & Technologies:	Auto CAD Inventor, Auto CAD Fusion, Altium, V-REP, Ardiuno, LaTeX.
Laboratory Skills:	PCR, Restriction Digestion, Cloning, Transformation, Gel Electrophoresis.
Language Proficiency:	English (written and spoken), Hindi (native), German (elementary proficiency).

Coursework

Introduction to Computing	Introduction To Biology
Computational Biology and Bioinformatics*	Computational Cognitive Science*
Introduction to Electronics	Machine Learning'
Biotechnology	Dynamics
Linear Algebra and ODE	Partial Differential Equations
Organic Chemistry-1	Organic Chemistry-2
Manufacturing Process I	Manufacturing Process II
Introduction To Art of Video Making	Thermodynamics
Chemistry Laboratory	Physical Chemistry
Soft Skills and Personality Development	Inorganic Chemistry I
Engineering Graphics	Atoms, Molecules, and Photons
Microeconomics	Complex Analysis

(* in progress) (' Online Courses)

Miscellaneous/Extra-Curricular

- Participated in **EXL EQ'18**, Analytics Competition organized by EXL service (an operations management and analytics firm)
- Participated in **Soccon '16 (&17)**, SOCial CONquest in Techkriti (annual international, technological festival).
- Participate in **Takneek '16 (&17)** (Intra-IITK Science & Technology Championship), made a controller using an Inertial Measurement Unit.
- Participated in **code.fun.do 2017** (developing competition organized by Microsoft), built a chat interface on Node.js platform.
- Participated in Wall Climbing in Fresher's **Inferno'15** (Intra-IITK Sports Championship).
- Participated in **Spectrum'15** (Films & Media Council festival cum Inter-pool competition).
- Volunteer in Hospitality Cell, **Udghosh'15** (annual sports meet of IIT Kanpur).
- Volunteer in Ritambhara (fashion carnival), **Antaragni'15** (annual cultural festival of IIT kanpur).
- Successfully completed Machine Learning (Coursera), Ethical Hacking (Udemy) online courses.