

# Rupika Gaba

**Date of birth:** 10/04/2002 **Gender:** Female **Phone number:** (+91) 8218170550

**Email address:** [gabarupika2001@gmail.com](mailto:gabarupika2001@gmail.com)

**Work:** (India)

## ABOUT ME

Currently pursuing Masters in Environmental Science and Technology

## PROJECTS

[ 01/07/2022 – 20/12/2022 ]

**1. Gen-mod Yeast to enhance the production of plant extracts** Our team outlined a synthetic plasmid vector to produce valuable medicinal metabolites from critically endangered plants. We genetically engineered an *S.cerevisiae* strain capable of synthesizing Sitogluside, an anticancer and depigmenting compound. This work aims to contribute to sustainable and organic methods of production.

[ 15/05/2021 – 15/07/2021 ]

**2.Polymeric Smart "Nutribots" for Sustainable Aquaponic agriculture** Our team pioneered the "Polymeric Smart Nutribots," an innovative aquaponics project promoting sustainable agriculture in confined spaces. Using hydrogels and nutrients, we achieved water conservation and enhanced plant growth. Leguminous plants, *Vigna radiata* and *Cicer arietinum*, were studied, and the results showcased Nutribots' effectiveness. This work contributes to sustainable practices and water-saving techniques in agriculture.

[ 15/05/2020 – 15/07/2020 ]

**3. A Large Scale Study On The Prevalence Of Comorbidities Among Covid-19 Patients** Our team conducted a comprehensive study on comorbidities and Covid-19 infection. Hypertension and obesity were the most prevalent underlying diseases among Covid-19 patients. Our findings emphasized the significance of comorbidities in increasing Covid-19 severity and mortality. Regional variations were observed, highlighting the importance of understanding these impacts for effective precautions.

[ 01/01/2024 – Current ]

**4. Impact of Climate Change on Space Cooling Energy Demands in Indian Climatic Zones.** Our project aims to predict future temperature and relative humidity using a sophisticated machine learning model that combines Convolutional Neural Networks (CNN) and Long Short-Term Memory (LSTM) networks. Following this, we will calculate the space cooling energy demand in various Indian climatic zones using two distinct methods: Cooling Degree Days (CDD) and Wet-Bulb Cooling Degree Days (WCDD). By comparing these methods, we aim to highlight the significant role of relative humidity in determining energy demand.

## EDUCATION AND TRAINING

### Graduation

**Maitreyi College - University of Delhi** [ 01/06/2019 – 30/04/2022 ]

**City:** Delhi | **Country:** India | **Website:** <http://maitreyi.ac.in/> | **Field(s) of study:** Life Sciences | **Final grade:** 8.24 cgpa

### Post Graduation

**Central University of Punjab** [ 01/07/2022 – Current ]

**City:** Bathinda | **Country:** India | **Website:** <http://cup.edu.in/> | **Field(s) of study:** Environmental Science and Technology

## PUBLICATIONS

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[2022]

**Herbal Drugs Discoveries in the Different Time Frame** rupika g, deeksha p, komal, harshita, anamika s. herbal drugs discoveries in the different time frames. j of pharmacol & clin res. 2022; 8(5): 555747. doi: 10.19080/jpcr.2022.08.555747

## VOLUNTEERING

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[ 01/04/2023 ]

**1. GBRI- "NASA" International Sustainability Program** I have engaged in learning about climate change and its mitigation, including understanding carbon footprints and green buildings. Additionally, I have experience working collaboratively in teams for presentations.

[ 01/11/2022 – Current ]

**2. IFSA LC FRI** I have experience in attending and organizing events, writing articles for LinkedIn pages, and conducting webinars, seminars, and quizzes related to forestry.

[ 01/04/2023 – 01/06/2023 ]

**3. Mission LiFE ( Soaring Sparrow Foundation & MoEFCC)** I conducted surveys, raised awareness about lifestyle impacts on the environment and climate change among local communities, and advocated for relevant government policies.

[ 01/01/2022 – 10/02/2022 ] Delhi

**4. Umeed Foundation** I have been actively involved with an environmental NGO, where our primary objectives revolve around raising awareness about conservation, emphasizing tree plantation within local communities, and organizing fundraising events to drive our mission forward.

[ 01/01/2021 – 01/01/2022 ] Delhi

**5. Centre For Research** I participated in my college research cell, organizing seminars, webinars, workshops, and research projects. I also developed skills in creating presentations and designing posters.

[ 10/12/2020 – 10/03/2021 ] Delhi

**6. UNHAD FOUNDATION** At the NGO, I worked on social media management, proofreading, and leading campaigns for educating underprivileged children. Our goal was to create a positive impact and foster a more equitable society.

[ 01/12/2020 – 01/04/2021 ]

**7. Livewire (python course)** I have a strong foundation in Python programming and have completed various projects related to Python development.

[ 15/07/2020 – 15/06/2021 ]

**8. WWF** At the organization, I worked on promoting plastic waste management awareness, water conservation, and conducted surveys while interacting with local communities to drive sustainable practices and environmental preservation.

[ 01/01/2024 – Current ] Mumbai

**9. IIT Bombay Research Internship Award Program** Working on a Research Project on Impact of Climate Change on Space Cooling Energy Demands in Indian Climatic Zones.

[ 08/07/2024 – Current ] New Delhi

**Ministry of Environment, Forest and Climate Change (MOEFCC)** Currently I am working as an intern at Climate change division in Ministry of Environment, Forest and Climate Change.

## LANGUAGE SKILLS

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**Mother tongue(s):** Hindi

**Other language(s):** English , Punjabi

## DIGITAL SKILLS

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### Personal skills

good listener/good speaker / Good Communication and Writing Skills / Listening and empathy / confidence and honesty / • Punctuality / adaptable in new & challenging environments / Thirst for learning new skills and a curious nature / Scientific writing skills / Team management & Team work

### Digital skills

Word, Excel, Power pont intermediate knowledge / Presentations Slideshows (Power point Google Slides Open Office Impress) / Microsoft Office package: Microsoft Word, Excel, PowerPoint, Access / Data Science | Data Collection, Data Processing, Data Analysis, Data Visualisation / Python Language - Basic knowledge / proof-reading / Making posters

### Laboratory skills

Chromatography, SDS PAGE, ELISA / Quantitative determination of inorganic anions and cations by titration and gravimetry / Uv-Vis Spectroscopy / Ph meter / Multi meter / Imprinter

## CONFERENCES AND SEMINARS

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[ 24/02/2021 ] Online

**1. International Interdisciplinary e-Conference Sustainable Future for Humanity: The New Learning Curve** Participated with an oral presentation titled A Large Scale Study On The Prevalence Of Comorbidities Among Covid-19 Patients .

[ 20/07/2021 ]

**2. E- waste Awareness Webinar**

[ 19/02/2021 ] Short Term Courses Committee, Maitreyi College, University of Delhi

**3. Webinar on Computer Aided Design and 3D painting**

[ 15/09/2023 – 17/09/2023 ] Kerala Institute of Local Administration

**4. LCOY INDIA 2023 ( Local Conference of Youth) On Climate Change Adaptation and it's loss and damage** I was part of a three-day conference on global issues - climate change, just transition, and climate justice. We had engaging sessions, debates, and visited a waste management facility to learn about waste handling. Together, we crafted a powerful youth statement aiming to influence COP28 and engage India's government.

## HONOURS AND AWARDS

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[ 06/08/2020 ] Maitreyi College (University of Delhi)

**1. 1st Position in Summer Internship Project Presentation 2020** We have presented our 2 months research project work on " A Large Scale Study On The Prevalence Of Comorbidities Among Covid-19 Patients" under my college professors Dr. Luni and Dr. Tejendra Kumar.

[ 04/11/2021 ] Maitreyi College (University of Delhi)

**2. 2nd Position in Summer Internship Project Presentation 2021** We have presented our 2 months research project work on "Polymeric Smart "Nutribots" for Sustainable Aquaponic agriculture" under my college professors Dr. Gita Batra Narula, Dr. Swarandeep Kaur and Dr. Kiran Soni.

[ 24/12/2022 ] Indian iGEM League Competition

**3. Bronze Medal** We have presented our 6 months project work in Indian iGEM League Competition on "Gen-mod Yeast to enhance the production of plant extracts" and also get the title of best documentation and troubleshooting title.

## HOBBIES AND INTERESTS

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**Area of Interest** Climate change, Air Pollution , Energy demands, Renewable energy resources, Solid waste management ,

**Hobbies** Singing, Writing, Travelling, Painting, Reading, Making Funny reels

## RECOMMENDATIONS

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**Name: Dr. Yogalakshmi K N** | Professor  
HOD of Environmental Science and Technology Department  
Email: [yogalakshmi@cup.edu.in](mailto:yogalakshmi@cup.edu.in)

**Name: Dr. Gurubalan Annadurai** | Assistant Professor  
Indian Institute of Technology, Bombay (IIT Bombay)  
Email: [guru.a@iitb.ac.in](mailto:guru.a@iitb.ac.in) | Phone number: (+91) 9943045617

**Name: Dr. Sunil Mittal** | Associate professor  
Environmental science and technology, Central University of Punjab  
Email: [sunil.mittal@cup.edu.in](mailto:sunil.mittal@cup.edu.in)