

# Isha Dogra

Atlanta, Georgia | (470) 838-2733 | isha.dogra.gatech@gmail.com | <https://www.linkedin.com/in/isha-dogra/>

## EDUCATION

**Georgia Institute of Technology, Atlanta, GA**

**Aug 2021-May 2023**

*Master of Science in Environmental Engineering (GPA = 3.75/4)*

- **Coursework:** Process Principles, Chemical Principles, Sustainable Engineering, Environmental Nanotech, Physicochemical Processes, Biological Processes, Sustainable Chemistry, Advanced Environmental Data Analysis, Engineering Communication
- **Memberships:** AEES, ASCE, EWRI, Students Organizing for Sustainability

**Birla Institute of Technology and Science (BITS), Pilani, India**

**Aug 2017-Feb 2021**

*Bachelor of Engineering in Chemical Engineering (Major GPA = 3.54/4)*

- **Coursework:** Fluid Mechanics, Transport Phenomena, Separation Processes, Membrane Engineering, Environmental Biotechnology and Waste Management, Environmental Pollution Control, Process Equipment Design, Engineering Graphics, Biochemical Engineering
- **Awards:** The Monali Dey Award- Best graduating student, Department of Chemical Engineering

## SKILLS

**Software and Programming:** Microsoft Office (Word, Excel, PowerPoint, Outlook), AutoCAD, ArcGIS, MATLAB, SimaPro, BioWin, ANSYS Fluent, ASPEN Plus, Adobe Illustrator, OriginPro, Python, C

**Soft Skills:** Teamwork, written and verbal communication, attention to detail, problem-solving, passionate self-starter, quick and curious learner, strong planning and organizational skills, public speaking, leadership

## WORK EXPERIENCE

**Tech Dining, Georgia Institute of Technology, Atlanta, Georgia**

**Jan 2022-present**

*Student Assistant*

- Performing data entry and multivariate assessment using Excel to design signage and displays for more than 200 food items across four retail outlets on campus with a daily footfall of more than 1000 students and visitors
- Continuously communicating with the outlets' managers and staff to understand, brainstorm and meet their administrative needs efficiently

**Leave It in the Ground Initiative (LINGO), Radebeul, Germany**

**May 2021-Dec 2021**

*Project Intern (Remote)*

- Mapped the overlap between fossil fuel distribution and protected areas globally using ArcGIS to prevent indiscriminate mining
- Created a database for 95% of the world's countries that publish national coal and protected area data presented at the COP26

**Defence Research and Development Organization (DRDO), Delhi, India**

**May-July 2019**

*Internship Trainee at the Centre for Fire, Explosive and Environment Safety*

- Developed a novel, simple and low-cost filter with Graphene Oxide-based nanocomposites and natural materials like fallen leaves
- Designed experiments to test the material, modeling a removal efficiency of 80.93% for toxic dyes, higher than conventional materials

**Cargill Foods, Gurgaon, India**

**June- July 2018**

*Summer Intern, Research & Development and Finance*

- Tested ten liquid glucose and wheat flour market samples from different brands
- Compared samples and derived inferences using quality parameters like pH, moisture and ash content, and degrees Brix

## RESEARCH AND PROJECTS

**Degradation of Microplastics and Nanoplastics in aquatic systems**

**Oct 2021-present**

- Designing a research study on inherent and environmental parameters that control the rate of degradation in natural aquatic systems to further devise methods to aid their decomposition in nature

**Mixed Matrix Membranes (MMMs) for Water-based Contaminant Removal**

**Aug 2020-present**

- Publishing a review paper on critical analysis of 100 research articles for 15 heavy metal and salt ions to quantify the efficiency and capabilities of various MMMs for contaminant removal from water

**Graphene Oxide-cellulose nanocomposite for dye removal from drinking water**

**May 2020-present**

- Publishing research on the development of a novel nanocomposite filter made with fallen leaves to remove toxic dyes from drinking water
- Modeled a higher removal efficiency compared to traditional high-performance materials like Graphite Oxide and Graphene Oxide

**Natural gas versus Solar: A Preliminary Impact Assessment**

**Aug-Dec 2021**

- Performed Life Cycle Analysis to compare retrofitting a coal-fired power plant to natural gas and constructing a photovoltaic solar field with a cross-functional team of six using SimaPro simulation software

**'The Unwaster' (integrated waste management system)**

**Sep 2019-Sep 2021**

- Selected as a top-10 finalist in a start-up hackathon at BITS Pilani
- Won the Bright Idea Competition organized by the Department of Scientific and Industrial Research, Government of India

**Algae for Biodiesel Production**

**Jan-Jul 2020**

- Created a database discussing 14 relevant parameters to find the best strain of microalgae for biodiesel production quantitatively

## LEADERSHIP/SERVICE

**American Institute of Chemical Engineers, BITS Pilani**

Secretary-cum-Treasurer (Jan 2020-Feb 2021), Chapter President (Mar 2019- Jan 2020)

**Indian Institute of Chemical Engineers, BITS Pilani**

Secretary (Apr 2019- Feb 2021)

**National Service Scheme (NSS), BITS Pilani**

Head of Human Resources, Department Parishodh (Apr-Dec 2018), Volunteer (Aug 2017-Jul 2020)