Abhijeet Singh

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Education

United Nations Information Portal for MEA(InforMEA) **Passed/Online**
Diploma, International Environmental Law and Governance *October 2021 – January 2022*

United Nations Information Portal for MEA(InforMEA) **Passed/Online**
Diploma, International Legal Protection on the Protection of Atmosphere *October 2021 – January 2022*

Indian Institute of Technology Patna **8.10/10**
Bachelor of Technology, Chemical Science and Technology *July 2013 – May 2017*

City Montessori School **87.33/100**
Senior Secondary, ISC *April 2011 – May 2012*

City Montessori School **92.14/100**
Secondary, ICSE *April 2009 – May 2010*

Qualified Enterance Examination

Tata Institute of Social Sciences **2021**
Master of Arts, Social Work in Livelihoods and Social Entrepreneurship *Mumbai*

Joint Enterance Examination, Advanced **2013**
Bachelor of Technology, Indian Institute of Technology Patna *India*

Work Experience

Sapiens Planet Foundation August 2019 – Current
Director/Co-founder *Lucknow, India*

- Co-founded a section 8 Non profit initiative to channelise research and development in the areas of anthropogenic pollution, climate change mitigation and sustainable agricultural development

Projects

No-Umbrella: A Weather App for Climate Change Believers November 2022 – January 2023
Kotlin, TensorFlow, Python *Lucknow, India*

- Developed an android application indicating how much your current, weekly and monthly weather is deviating from previous years weather patterns by utilising the JSON data from 'Weather API' and modeling the weather from available previous years weather data
- Carbon footprint and mitigation step suggestions based on your current Carbon footprints and possible targets

Climate Change Action-Impact Dashboard July 2022 – Current
Tableau, MS Office *Lucknow, India*

- Created a unified and comprehensive Tableau dashboard for Climate change Goals, Actions and Impacts of countries on yearly basis and sector wise emissions with multivariate analysis of various indicators like CO2 emissions, Natural Disaster frequency, Green Capital Expenditure, PPI, Industrial discharge, Urbanisation trends, etc.
- Plan to build machine learning model and pipelines for future forecasts and Integrate the Dashboard with the ArcGIS mapping of the Projects undertaken to combat climate change and the geographical features it impacts

Groundwater Potential Zoning December 2021 – January 2022
QGIS, Python *Lucknow, India*

- Groundwater Potential Zoning using GIS-AHP Multicriteria Analysis (GLA Methodology)
- In QGIS-LTR Using Raster maps of available water capacity, annual percolation rate, Elevation (SRTM) and aquifer covering lithology in addition to analysis of slope and distance from surface water to calculate the protective function of an aquifer for the Ganga river basin districts of Uttar Pradesh, India

Correlation Analysis on the Paddy Residue Burning and Air Quality November 2021
ArcGIS, Python *Lucknow, India*

- Correlation Analysis on the Paddy Residue Burning in North-Western States(Haryana, Punjab and Western Uttar Pradesh) and Air Quality Parameters(SPM2.5 and CO) levels in the Delhi-NCR from January 2018- March 2020
- Used QGIS to map Land surface Temperature(LST) Data obtained from Spectral Band 10 of LANDSAT-8 satellites to perform supervised LULC Analysis, while simultaneously using Pandas (Python library) on Air Quality Data Obtained from CAAQMS of Central Control Room-CPCB

Detection of Rainfall anomaly July 2021 – August 2021
Python, Google Earth Engine *Lucknow, India*

- Detection of rainfall anomaly using Google Earth Engine and python API for Flash Flood regions
- Used Climate Hazards Center InfraRed Precipitation with Station data (CHIRPS) to calculate rainfall anomaly for regions prone to Flash Floods (Kerala, India)

Institute Funded Research Projects

Final Year Project May 2016 – June 2017
Dr. Nitin D. Chaturvedi *IIT Patna, India*

- **Minimizing compression work in a multi-pressure level Heat Supply Networks (HSNs)**
- Developed a methodology for targeting shaft work utility for the multi-pressure level systems in an intermediate fluid stream network in Combined Cooling Heat and Power (CCHP) Plants.

Semester Elective Project February 2017 – April 2017
Dr. Rajib Kumar Jha *IIT Patna, India*

- **Pectoral Muscle segmentation on Digital Mammograms by Non Linear Diffusion Filtering**
- Successfully applied Non-Linear Diffusion Filtering on MLO (Medio Lateral Oblique) views of the mammograms to remove the pectoral muscle obstruction which may produce bias in the detection procedures of Breast Cancer.

Summer Research Internship May 2016 – July 2016
Tata Steel Jamshedpur—CSIR-IMMT *Jamshedpur, Bhubneshwar*

- **Development and analysis of high temperature metal composites of Aluminum(Al) and Iron(Fe) with Graphene Oxide**
- Successfully performed the plasma treatment of the mixture in various compositions in Argon (atmosphere) and analysed the ingot with Powder XRD (Co) and SEM Analysis

Volunteer Experience

Project Coordinator August 2019 – Current
Sapiens Planet Foundation *Lucknow, India*

- **Research Study on Groundwater Contamination:** Policy development and technical research on ground water contamination in the catchment area of the Gomti river due to Industrial discharge and Agricultural runoffs near the region of Atrauly(Lucknow, India)
- **BTK to ZigZag Transition:** Successfully transitioned from a Bulls Trench Kiln (BTK) to the ZigZag firing kiln thereby reducing Coal(Grade B) consumption and CO emission by approximately 20 percent and 25 percent respectively

Relevant Coursework

Technical Core
Indian Institute of Technology Patna *2013-2017*

- Process Plant Design and Economics
- Process Control and Instrumentation
- Environment Science and Technology
- Industrial Chemistry
- Bio-process Engineering
- Digital Image Processing

Humanities Elective
Indian Institute of Technology Patna *2013-2017*

- Introductory Sociology
- Sociology of Development
- Health Care Management
- Fundamentals of Cognitive Science

Relevant Skills

Languages: Hindi (Native Proficiency), English (Professional working proficiency)
Technical proficiency: MS-Office, Python, Tableau, MySQL, GAMS, ArcGIS, QGIS, AutoCAD, SolidWorks, MATLAB

Scholastic Achievement

- Awarded the highest **grade (AA)** in all the 4 elective humanities courses offered by the Department of Humanities and Social sciences during the undergraduate program. Among the nation's top **1 percentile** in secondary, senior secondary as well as in the undergraduate qualifying examinations (Joint Entrance Examination(JEE), Mains and Advanced).
- Awarded **Good Conduct Award** in **2007** for cooperative and helping behaviour in Secondary School

International Participation

Human Powered Vehicle Challenge January 2015
American Society of Mechanical Engineers (ASME) *New Delhi, India*

- As a student member of ASME, **Led the transmission team of 4 people** in the international competition organised by ASME which saw the participation of more than **48 teams** across the globe.
- Designed a complex system of **gear transmission** of a two wheeler fully recumbent bicycle.
- Successfully finished at **5th** place in the design event

Certifications

Integrated Spatial Planning 2022
United Nations Development Program *Online*
Using Spatial Data for Biodiversity 2022
United Nations Development Program *Online*
Green Bonds 2022
United Nations Development Program *Online*
Effectiveness and Compliance of Multilateral Environmental Agreements 2022
United Nations Environment Program *Online*
Global Framework for a pollution-free planet 2022
United Nations Environment Program *Online*
Introduction to Human Rights and the Environment 2022
United Nations Environment Program *Online*
Introductory Course on International Legal Framework on Trans-boundary Air Pollution 2022
United Nations Information Portal for MEA(InforMEA) *Online*
Introductory Course to International Environmental Law 2022
United Nations Information Portal for MEA(InforMEA) *Online*
Introductory Course to the International Legal Framework on EIA 2022
United Nations Information Portal for MEA(InforMEA) *Online*
Introductory Course to the International Legal Framework on Ozone Depletion 2022
United Nations Information Portal for MEA(InforMEA) *Online*
Carbon Taxation 2021
United Nations Institute for Training and Research (UNITAR) *Online*
Climate Change International Legal Regime 2021
United Nations Environment Program *Online*
Geospatial Information Technology (GIT) in Fragile Contexts 2021
United Nations Institute for Training and Research (UNITAR) *Online*
Climate smart soil and land management 2021
Food and Agriculture Organization (FAO) e-learning Academy *Online*
Climate Smart Fisheries and Aquaculture 2021
Food and Agriculture Organization (FAO) e-learning Academy *Online*
Small Scale agricultural mechanization hire services as a Business Enterprise 2021
Food and Agriculture Organization (FAO) e-learning Academy *Online*
Monitoring and preventing Ciguatera poisoning 2021
Food and Agriculture Organization (FAO) e-learning Academy *Online*
Statistical Learning 2016
Stanford Lagunita *Online*
Introduction to Data Science 2016
Datacamp *Online*

Scholarships

- Awarded **MCM Scholarship** of **Government of India** for two years , **2013-14** and **2015-16**

Academic Publications

Minimizing Compression Work in a Multi-Pressure Level Steam Network Vol. 88 2021
Journal: Chemical Engineering Transactions *AIDIC, Italy*

Declaration

I hereby declare that the information provided is true to the best of my knowledge. Additional documentation will be presented for verification.