

Curriculum-Vitae



Personal Information: -

Name: **SANA RAFI**
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Academia: [52\) Sana Rafi | Jamia Millia Islamia University, New Delhi - Academia.edu](https://www.academia.edu/52/Sana_Rafi_Jamia_Millia_Islamia_University_New_Delhi)
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Nationality: Indian

Educational Qualifications: -

1. Ph.D titled 'Assessment of Climate Hazards in the Garhwal Himalayan Region using Geospatial Techniques' submitted to the Department of Geography, Jamia Millia Islamia, New Delhi, 2018-2021.
2. Ph.D. Coursework, Jamia Millia Islamia, New Delhi, 2019. Completed with 75.75% and Distinction.
3. PG Diploma in 'GIS and Remote Sensing Training (DGIS Training) with 70%, Swastik Edustart Geospatial Training Institute, Delhi approved by ITT-Council, Delhi, 2019-20.
4. Qualified UGC NET/JRF, 2018.
5. M. A/M.Sc. Geography with 85.9% and Distinction, Jamia Millia Islamia, New Delhi, 2018.
6. Qualified UGC NET (National Eligibility Test), 2017.
7. B. A/B.Sc. (Hons) Geography with 83.9% and Distinction, Jamia Millia Islamia, New Delhi, 2016.
8. Qualified Central Teachers Eligibility Test (CTET) from Central Board of Secondary Education in 2013, 2016 and 2018.
9. Diploma in Elementary Teachers Education (All teaching subjects) with 73.43%, Jamia Millia Islamia, New Delhi, 2013.
10. Intermediate (Biology, Chemistry, Physics, Mathematics, English) with 69.8%, Jamia Millia Islamia, New Delhi, 2011.
11. Matriculation (Sci. & Tech., Social St., Mathematics, English, Hindi, Urdu, Islamic St.) with 75% Marks and Distinction, Jamia Millia Islamia, New Delhi, 2009.

Fellowships and Academic Awards: -

1. Awarded SRF, on March 12, 2021, by the committee comprising the HOD, Prof. Mary Tahir, JMI and one outside expert, Prof. S.B. Singh (Rtd.), Ex-Head, Department of Geography, Banaras Hindu University, Varanasi-221005.
2. Received JRF scholarship during Aug 14, 2018 to Sept 23, 2021 from UGC.
3. Jamia Teacher's Association Scholarship, J.M.I, New Delhi, 2018.
4. Gold Medalist, M.A/ M.Sc. Geography, Jamia Millia Islamia, New Delhi, 2016-18.
5. Gold Medalist, B. A/B.Sc (Hons) Geography, Jamia Millia Islamia, New Delhi, 2013-16.
6. Received Merit-cum Means Scholarship for Professional and Technical CS, MOMA scholarship scheme, Ministry of Minority Affairs, Govt. of India, 2013.
7. Gold Medalist, Diploma in Elementary Teacher's Education, Jamia Millia Islamia, New Delhi, 2011-13.
8. Topped in Diploma in E.T.E (Urdu), received Merit certificate and award, Urdu Academy, Delhi (2012-13).
9. Saeed Ansari Medal for securing highest marks in Dip. in E.T.E, Faculty of Education, Jamia Millia Islamia, New Delhi 2012-13.
10. 2nd position (Merit Certificate and medal), 'Poster Sazi/Poster making on Environment', Inter University Competition, Bazm-e-Jamia (Subject Association), Dept. of Urdu, J.M.I, 2013.
11. 1st position 'Flower Arrangement', Dept. of Teacher's Training & Non-Formal Education (Institute of Advanced Studies in Education), Faculty of Education, J.M.I, Delhi, 2012-13.

12. 3rd position 'Best out of Waste', Dept. of Teacher's Training & Non-Formal Education (Institute of Advanced Studies in Education), Faculty of Education, J.M.I, Delhi, 2012-13.
13. 2nd prize for making 'Magnetic Crane' in Science Exhibition (Junior Group) on Foundation Day, Jamia Sr. Sec. School, J.M.I, Delhi, 2009.
14. Silver Medal for serving as Volunteer and raising fund in Ten days 'Mass Awareness Campaign against CANCER/HEPATITIS-B', Care Promise Welfare Society, Delhi, 2004.

Administrative Position

1. Vice- President and class representative, Jamia Geography Association, Dept. of Geography, J.M.I, Delhi, 2017-2018.
2. Joint secretary and class representative, Jamia Geography Association, Dept. of Geography, J.M.I, Delhi, 2015-2016.
3. House Representative, 'Campus Renovation during NSS camp', Dept. of Teachers Training and Non-Formal Education, Faculty of Education, J.M.I, 2012-13.

Area of Specialization

Climate Hazard, Disaster Management, Climate Variability and Change, Floods and Landslide Hazard Assessment, Application of Geospatial Techniques, Application of Statistics and Geo-statistics, Public Health, Resilience.

Participation in Faculty Development Training Programme

1. Faculty Development Training Programme on "Disaster Risk Reduction" organized by Department of Geography, Jamia Millia Islamia, New Delhi 110025 in collaboration with National Institute of Disaster Management, New Delhi-110042, from August 1-5, 2022.

Invited lectures:

1. Delivered a lecture on 'Coordinate System, Map Projection and Datum', at Swastik Edustart, Delhi, Sept 2019.
2. Keynote Speaker, Environmental Day, 2022 organized by Zariya: The Way of Serving.

Membership of National Scientific Organizations:

- Life Member, Environment and Social Development Association (ESDA), Delhi.
- Member of Global Ecovillage Network, The Park Forres, Scotland, IV36 3TZ, UK.

Research Papers Published in National and International Journals (07)

1. **Sana Rafi**, Nitesh Kumar Maurya, and Raghupathi Balasani (2024). *Evaluation of Shoreline Alteration along the Jagatsinghpur District Coast, India (1990-2020) using DSAS*. Ocean and Coastal Management. Elsevier.
2. Chandra Kant Bhardwaj, Naveen Chandra Talniya, Abhilasha Mishra, Varun Pratap Singh, **Sana Rafi** (2023). '*Synthesis, spectral, chromatographic and antimicrobial studies of transition metal complexes of chromium (III) and cobalt (II) ions with alprazolam drug*'. Research Journal of Pharmacy and Technology., Vol 17, Issue 7. Paper ID:23830175229110472.
3. **Sana Rafi**, Nitesh Kumar Mourya, Taruna Bansal, Saleem Uddin, Chandra Kant Bhardwaj (2021). *Assessing Disaster Resilience in an Educational Setup Using Geo-Spatial Technology: A Case Study of Jamia Millia Islamia University, India*. IJEP.
4. Chandra Kant Bhardwaj, Umesh Chandra, **Sana Rafi** and O. P. Dubey (2022). *An analytical survey on the role of nanotechnology in groundwater remediation*. Water Supply. Vol 22 No 11, pp. 8092 – 8103 doi: <http://iwaponline.com/ws/article-pdf/doi/10.2166/ws.2022.367/1123145/ws2022367.pdf>. ISSN 1606-9749, EISSN 1607-0798. Available in SCI-E, Scopus, UGC Care list, Google scholar, DOAJ.
5. **Sana Rafi**, Chandra Kant Bhardwaj, Mary Tahir, Zeeshan Alam (2020). *Status of Wetlands in Delhi: A Spatio-Temporal Study*. International Journal of Environmental Protection (IJEP). 42(11):1382-1391(2022). (ISSN:0253-7141). Available at SCOPUS, ULRICH, CAS, ICI etc. It is included in the UGC-CARE List Group II.
6. Nitesh Kumar Maurya, **Sana Rafi**, Saima Shamoo (2022). *Land use/land cover dynamics study and prediction in jaipur city using CA markov model integrated with road network*. GeoJournal 88, 137–160. <https://doi.org/10.1007/s10708-022-10593-9>. 1572-9893. Available in SCI, Scopus, UGC Care list, Google scholar.
7. Saleem Uddin, **Sana Rafi** (May 2019). *ENERGY SAVINGS IN HVAC SYSTEM USING GREEN BUILDING PRACTICE AND ITS ENVIRONMENTAL BENEFITS WITH AN EXAMPLE FROM GREATER NOIDA, INDIA*, Journal of Emerging Technologies, and Innovative Research, DOI: Vol. 6, Issue 5, pp. 209-223, ISSN: 2349-5162. Available in Google scholar.

Peer Review Publications (07)

1. **Sana Rafi**, Amir Ali Khan, Mary Tahir (2023). *Trend Detection of Precipitation and Temperature in Srinagar City, Jammu and Kashmir Himalayas, India*. Indian Journal of Spatial Science, 2023:14(1)., pp. 43-53., EISSN: 2249-4316, ISSN: 2249-3921.
2. Iqbal Abedin, **Sana Rafi**, Mary Tahir, Mahima, Nelia Lois Chauhan (2022). *Geographical Analysis of Student*

- Migration: A Case Study of Batla House, South-East Delhi, India*. IJARMS. Jan. 31 [cited 2023 Jun. 23]; 5(1):195-206, ISSN 2581-8996. Available from: <https://journal.ijarms.org/index.php/ijarms/article/view/400>
- Nelia Lois Chauhan, Devendra Singh, **Sana Rafi**, Mary Tahir, Iqbal Abedin (2022). *Analytical Survey on Knowledge and Practices Related to Hand Hygiene Among the Women Living in the Slums of Agra City*. IJARMS . Jul. 31 [cited 2023 Jun. 23]; 5(2):70-7. ISSN 2581-8996. Available from: <https://journal.ijarms.org/index.php/ijarms/article/view/402>
 - Amir Ali Khan, Safia Khatoon, **Sana Rafi** (2022). *Disaster and Development Interface: Performance of Critical Infrastructure during Kerala Floods (2018)*. Global Journal of Current Research (ISSN: 2320-2920), 9(2) 2022; 42-52. DOI: 10.13140/RG.2.2.19306.59841.
 - Sana Rafi**, Mary Tahir (2022). *Identification of Tree Line Shift Using Geospatial Technology in the Bhatwari block of The Garhwal Himalayan Region, India*. Indian Journal of Spatial Science, 2022:13(1)., pp. 100-159., ISSN: 2249-3921.
 - Neeraj Kumar, **Sana Rafi**, Mary Tahir, and Gopal Prasad (2021). *Assessing the Trend and Status of Air Quality in NCT Delhi*. International Journal of Environmental Sciences., 10(4) 2021; 84-94. (ISSN: 2277-1948). Available in Google scholar
 - Sana Rafi** (2015-16). *Education only teaches us to be competitive and not cooperative*, Nova Geographies; student's e-journal, Jamia Geography Association, pp. 10 to 11.

Book Chapters (07)

- Mary Tahir, Nelia Lois Chauhan, Mahima, and **Sana Rafi** (2024). Reconfiguring Human-Nature Relations through Ecofeminism: An Ethic of Care and Advancing Sustainable Development Goal 5 in an Indian Perspective. *Gender Equality and Sustainable Development: Challenges and Solutions in Developing Countries*", Springer Nature.
- Prepared course material for unit 6, "*Rehabilitation, Reconstruction, and Recovery*" for the course of PGDDRRM Program, IGNOU.
- Rakesh S, Bodiga Divya, Dewali Roy, Jogarao Poiba, Dinesha S, Arun Kumar, Kishore Nalabolu, Raghupati Balasani, Manju Bhargavi, Saritha JD, **Sana Rafi**, and Himadri Saha (2022). *New Trends and Criterion for Responsible Plant Nutrition*, in Regenerative Agriculture: Translating Science to Action, Taylor & Francis Group.
- Sana Rafi**, Mary Tahir, Raghupathi Balasani, Wani Suhail Ahmed (2024). *Unveiling Precipitation and Temperature Patterns in Kashmir Valley, India* in Climate Change, Vulnerabilities and Adaptation, Understanding and Addressing Threats with Insights for Policy and Practice. 978-3-031-49641-7.
- Sana Rafi**, Raghupathi Balasani, Mary Tahir, Faizan Ahmed, Wani Suhail Ahmed (2021). *Role of Artificial intelligence in agriculture sustainability, an example from India*. In: Meenu Rani, Bhagwan Singh Chaudhary, Saleha Jamal, and Pavan Kumar (eds) Towards Sustainable Natural Resources. Springer, Cham. eISBN: 978-3-031-06443-2 https://doi.org/10.1007/978-3-031-06443-2_15. Springer Nature Switzerland AG.
- Sana Rafi**, Mary Tahir (2020). '*Assessment of socio-economic development in the proposed smart city of Ghaziabad*' in Atiqur Rahman, Shahnaz Parveen and Mary Tahir (eds.), Urban Environment: Issues and Challenges, RK Books, ISBN No: 978-93-82847-99-1.
- Saleem Uddin and **Sana Rafi** (May 2019). *The concept of Green Building and Its Environmental Benefits: A Case Study of Noida*, U.P, in Syed Naushad Ahmad, Ateeque Ahmad, Nikhat Bano (eds.), Social and Environment, Keystone Publishing House, Delhi, ISBN No. 978-81-928754-2-2, pp.88-105.

Research Papers under Review in National and International Journals/Proceedings/Edited Books (Peer Review Publications)

- Umesh Chandra, **Sana Rafi**, Chandra Kant Bhardwaj, O P Dubey. *Groundwater Quality assessment through Physio-chemical Properties analysis in Bhagwanpur Block of Haridwar in India*
- Nitesh Kumar Maurya, **Sana Rafi**, and Raghupathi Balasani (2022). *Finding robust model for Urban Growth Prediction based on Land Use Land Cover Classification: A comparative study of CA Markov and MOLUSCE models*.
- Sana Rafi**, Mary Tahir. *Landslide Susceptibility Mapping in the Garhwal Himalayan Region (India): AHP based Multicriteria evaluation in GIS context*.

Papers presented in International Conferences/Seminar/Workshops: -(10)

- Shoreline Change Detection and Management in Jagatsinghpur coastal Stretch of Odisha, India using DSAS**, at the three days International Conference, under the theme of Environment, Sustainability and Technology in Social Sciences, at KL University, Vijayawada, Andhra Pradesh, June 1-3, 2023.
- Analyzing climate variability in Srinagar City: a part of Indian Himalayan Region** in International Conference on Challenges to Disaster Risk Reduction and Resilient Habitat, April 5-6, 2022, organized by Centre for Disaster Management Studies, Shaheed Bhagat Singh College, University of Delhi, India.
- "Assessment of Chemicals Hazard and Resilience in an Educational Setup: A case study of Jamia Millia Islamia University, India"** in the 5th World Congress on Disaster Management held at IIT Delhi, from Nov 24-27, 2021.
- 'Assessment of Groundwater Pollution Hazard of Bhagwanpur Block, Haridwar'** in the International Conference (Online) On Challenges of Disasters: Vulnerability, Adaptation and Resilience Organized by Centre for Disaster Management, Department of Geography, March 2-3, 2021.

5. **'Trend and variability detection of precipitation and temperature in Kashmir valley, a part of Indian Himalayan Region'** in the International Conference (Online) On Challenges of Disasters: Vulnerability, Adaptation and Resilience Organized by Centre for Disaster Management, Department of Geography, March 2-3, 2021.
6. **'Urban fire hazard in Delhi-perception towards fire safety'** in the International Conference (Online) On Challenges of Disasters: Vulnerability, Adaptation and Resilience Organized by Centre for Disaster Management, Department of Geography, March 2-3, 2021.
7. **'Covid 19: Health and Safety Aspect'** in the International Conference (Online) On Challenges of Disasters: Vulnerability, Adaptation and Resilience Organized by Centre for Disaster Management, Department of Geography, March 2-3, 2021.
8. **'Status of Wetlands in Delhi: A spatio-temporal study'** in the Global Water Congress, Organized by Environment and Social Development Association (ESDA), Delhi, Co-Organized by Grass Roots Research and Creation India (P) Ltd., Noida, India, October 2-4, 2020.
9. **Trend and Variability Detection of Monthly, Seasonal and Annual precipitation and temperature in Srinagar, J & K'** in the International Conference on Contemporary Issues in Integrating Health and Nutrition with the Emerging Areas of Food Technology, Agriculture, Environment and Allied Sciences, Shyama Prasad Mukherji College for Women, Delhi, India, April 6, 2019.
10. **The concept of green building & its environmental benefits: a case study of Noida, U.P'** in the international conference on Global Water Crises: Agriculture and Food Security in the Era of Climate Change, Dept. of Geography, A.M.U (India), December 1-3, 2018.

Papers presented in National Conferences/Seminar/Workshops (12): -

1. **Reconfiguring Human-Nature Relations through Ecofeminism: An Ethic of Care and Advancing Sustainable Development Goal 5 in an Indian Perspective** in the two-day seminar on Women, Sustainable Development and Technical organized by Commission for Scientific and Technical Terminology on August 10-11, 2023.
2. **LULC Change Analysis and Prediction of Jaipur City, India using CA Markov Model** in the National Seminar on Building a Resilient Future: Integrating Environment, Economy and Technology held at St. Bede's College, Shimla on March 24-25, 2023.
3. **Environmental Monitoring using Geospatial Technology** at IIMT College of Polytechnic, Gr Noida on January 25, 2023.
4. **AHP integrated GIS based Landslide Susceptibility Mapping in the Garhwal Himalayan Region of India** in the National Conference on Landslide Risk Assessment and Mitigation in India organized by Dept. of Geography, JMI, November 1-2, 2022.
5. **Landslide Impact on National Highway-7 in Uttarakhand** in the National Conference on Landslide Risk Assessment and Mitigation in India organized by Dept. of Geography, JMI, November 1-2, 2022.
6. **Role of Artificial Intelligence in Agriculture Sustainability, an example from India** in the National Conference on Agriculture, Environment and Sustainable Development in India organized by Dept. of Geography, AMU, November 5-6, 2022.
7. **Recognizing Heat Waves as a major disaster-A case study of Delhi NCR** in the National Conference on Agriculture, Environment and Sustainable Development in India organized by Dept. of Geography, AMU, November 5-6, 2022.
8. **Analysis of Changing Agriculture Productivity in Rajasthan** in the National Conference on Agriculture, Environment and Sustainable Development in India organized by Dept. of Geography, AMU, November 5-6, 2022.
9. **"Monitoring Treeline Shift in a part of Garhwal Himalayan Region using Geospatial Techniques"** in the National Conference (Online) On Climate Change and Pathways to Self-Reliant India: Opportunities and Challenges for Sustainable India' Organized by Department of Geography, J.M.I, India. March 2-3, 2021.
10. **'Assessing Disaster Resilience in an Educational Setup Using Geo-Spatial Technique'**, ESRI India User Conference, 2019, Noida, India, August 28-29, 2019.
11. **'Energy Conservation in Buildings & its environmental benefits: An approach towards the concept of Green Buildings'** in the National seminar on Urban Environment in the 21st Century: Issues and Challenges" under UGC-DRS-I programme, Dept. of Geography, J.M.I, Delhi, India, March 27-28, 2018.
12. **'Assessing socio-economic and housing condition in Ghaziabad City'** in the National conferences on Geo-informatics for Natural Resource Management, Dept. of Geography, J.M.I, Delhi, India, February 7-8, 2017.

Participation in International Seminars/Webinars//Conference (6): -

1. Online conference on Contemporary Issues in Geography on the theme **"Developmentalism Vs Peaceful Livelihood in the Present-Day Scenario"** organized by Indian Geographers & International Geographers on November 19, 2022.
2. Webinar on **"Digital Earth Africa – A Data Cube Approach To Scaling The Use Of Earth Observation Products Across Africa"** IRLOGI, January 13, 2021.
3. International Webinar (Online) on **"Fostering Global Collaboration among Agricultural Higher Educational Institutions"** organized by ICAR- National Academy of Agricultural Research Management on November 9, 2021.
4. Participated in enduring material titled **"Mental Health Effects of the Covid -19 Pandemic"** organized by Harvard Medical College on July 2, 2020.

5. Irlogi – GIS Ireland – Virtual Conference on ‘GeoSpatial Analytics: A European Perspectives’ held on November 26, 2020 - 2pm to 5pm.
6. International Webinar on “Preparation of Research Proposal” Organized by Department of Commerce Research Development Cell, Vikas College of Arts, Science and Commerce on June 27, 2020.

Participation in National Seminars/Webinars/Conference/Summit (13): -

1. 5 Days Online Webinar on “Hydrological and Hydrodynamic Modeling and Assessment of Climate Change (Practical Session) organized by Swastik Edustart Institution, Delhi, March 18-22, 2024.
2. Interactive Session on “Intellectual Property Rights (IPR) & Patent Filing System” in India organized by GIFTS NGO under Science Education Interactive Series 1.1 on March 17, 2024.
3. National Summit on **Powering Sustainable Livelihoods** organized by CEEW VILLGRO held at ITC Maurya, New Delhi on May 17, 2023.
4. “Cycling4Future 2.0” to create awareness of climate change, global warming, and the urgent need for time to make our cities smart and cycle-friendly organized within the EU Climate Diplomacy Weeks by the German Embassy, the Embassy of the Netherlands, and the EU Delegation to India as well as the other EU-Members States and others including Delhi by Cycle held on October 15, 2022.
5. One day webinar on Topic: “Exploring Google Earth Engine” organized by Swastik Edustart dated February 16, 2020.
6. One day webinar on Topic: “Exploring GIS” organized by Swastik Edustart dated November 14, 2020.
7. One day webinar on Topic: “QGIS and SAGA” organized by Swastik Edustart dated from April 5-10, 2020.
8. Webinar on “Coastal Zone Regulation, Development & Disaster Management” organized by National Institute of Disaster Management (NIDM) Tuesday, December 15, 2020.
9. Webinar on “Disaster Management in Natural Gas Sector”, 08th December 2020 organized by National Institute of Disaster Management (NIDM) Tuesday, December 8, 2020, India
10. Webinar on “Climate Change and Coastal Disaster Risk Reduction” organized by National Institute of Disaster Management (NIDM) Tuesday, November 24, 2020.
11. Webinar on “Early Warning and Communication” National Institute of Disaster Management (NIDM) Tuesday, November 17, 2020.
12. One day National webinar on “Geography in Covid and Post Covid India” organized by the Department of Geography, St. Xavier's College, Ranchi, Jharkhand on July 3, 2020.
13. One day webinar on “Geo-Hazard: A Prerequisite to Geo-Conservation” organized by the Department of Geography, St. John's College, Agra, on June 2, 2020.

Rapporteur in National/International Conferences/Seminar/Workshops: -

1. Technical Session XIX and IX in the 5th World Congress on Disaster Management held at IIT Delhi, from November 24-27, 2021.
2. Technical Session XIX “Management of the Pandemics of COVID-19: Social Issues” and Technical Session XXIX “Hazard, Vulnerability and Risk Assessment: Case Studies” in the 5th World Congress on Disaster Management.
3. Centenary Lecture entitled XX entitled “Science and Scientist in the New Millennium” (Online) organized by F/O Natural Sciences, Jamia Millia Islamia on Centenary Celebrations, March 10, 2021.
4. Technical Session I in the national Conference (Online) on IMPACT OF COVID-19: A GENDER PERSPECTIVE organized by Department of Geography, Jamia Millia Islamia in collaboration with Institute of Objective Studies (IOS), New Delhi on March 8, 2021.
5. Technical Session XVII and XXIV in the National Conference (Online). ‘On Climate Change and Pathways to Self-Reliant India: Opportunities and Challenges for Sustainable India’. Organized by Department of Geography, J.M.I, India. March 2-3, 2021.
6. Technical Session XX in the International Conference (Online). ‘On Challenges of Disasters: Vulnerability, Adaptation and Resilience’. Organized by Centre for Disaster Management, Department of Geography, March 2-3, 2021.

Professional Qualifications (40):

1. A three-day online **Short-Term Course on SAR Interferometry**, organized by IIT Tirupati Navavishkar IHub Foundation (IITTNiF) and National Centre for Geodesy (NCG), IIT Kanpur, June 17-19, 2022.
2. “Workshop: Satellite data analysis and Machine Learning classification with QGIS - PART 2” held on April 27, 2021, 02:00 PM Amsterdam, Berlin, Rome, Stockholm, Vienna.
3. “Workshop: Satellite data analysis and Machine Learning classification with QGIS - PART 1” held on May 11, 2021, 02:00 PM Amsterdam, Berlin, Rome, Stockholm, Vienna.
4. **Seven Days Online Capacity Building Program on “Hydro-Meteorological Disaster: Techniques of Measuring, Monitoring and Management of Floods”** Ministry of Education (Government of India) under the aegis of Pandit Madan Mohan Malviya National Mission on Teachers and Teaching (PMMMNMTT) organized by the Centre for Disaster Management Studies Shaheed Bhagat Singh College, University of Delhi in collaboration with Teaching Learning Centre Ramanujan College, University of Delhi from March 1-7, 2021.
5. 3-days online Basic Training on Disaster Management for the “Town and Country Planning Department” organized

- by National Institute of Disaster Management (NIDM) Friday, January 22, 2021, 11:00 am, India.
6. 3 Days Online Training Programme on “**Disaster Management**” National Institute of Disaster Management (NIDM) Thursday, November 26, 2020, 12:00 pm, India.
 7. One Week Online training on “**Statistics**” organized by Geo_Catalog in Collaboration with Epsilon Learning Solution, June 1-7, 2021.
 8. Five Day online training on **QGIS, SAGA and R**. at Swastik Edustart, Delhi from April 8-12, 2021.
 9. Three-day training course on the 4th International Workshop on GIS Technology and Application, Organized by Chinese Society for Geodesy, November 30 to December 2, 2021.
 10. One day workshop on ‘**Exploring QGIS**’ at Swastik Edustart, Delhi on November 14, 2021.
 11. One day online event on “**Emerging Technologies for Sustainable Development in Technical Collaboration with IBM**”, organized by Indo Global Group of Colleges, September 10, 2020.
 12. Certificate course on “**Deep Learning Fundamentals**” Powered by IBM Developer Skills Network and Issued by Cognitive Class on July 2, 2020.
 13. Certificate course on “**Data Visualization with Python**” Powered by IBM Developer Skills Network and Issued by Cognitive Class on July 2, 2020.
 14. Certificate course on “**Machine Learning with Python**” Powered by IBM Developer Skills Network and Issued by Cognitive Class on July 2, 2020.
 15. One-week professional development program on “**seeking Solutions during and Post Pandemic Covid-19: A perspective from Food Security, Health, Education, Economy and Technology**” organized by College of Business, University of Buraimi, Sultanate of Oman on June 21-25, 2020.
 16. Certificate course on “**Data Analysis with Python**” Powered by IBM Developer Skills Network and Issued by Cognitive Class on July 2, 2020.
 17. Certificate course on “**Predictive Modelling Fundamentals I**” Powered by IBM Developer Skills Network and Issued by Cognitive Class on July 2, 2020.
 18. Certificate course on “**Machine Learning with R**” Powered by IBM Developer Skills Network and Issued by Cognitive Class on July 1, 2020.
 19. Certificate course on “**Digital Analytics & Regression**” Powered by IBM Developer Skills Network and Issued by Cognitive Class on July 1, 2020.
 20. Certificate course on “**Statistics 101**” Powered by IBM Developer Skills Network and Issued by Cognitive Class on June 30, 2020.
 21. Certificate course on “**Data Visualization with R**” Powered by IBM Developer Skills Network and Issued by Cognitive Class on June 29, 2020.
 22. Certificate course on “**R 101**” Powered by IBM Developer Skills Network and Issued by Cognitive Class on June 28, 2020.
 23. Certificate course on “**Python 101 for Data Science**” Powered by IBM Developer Skills Network and Issued by Cognitive Class on June 28, 2020.
 24. Certificate course on “**Engineering: Undergraduate & master’s Virtual Internship Platform**” organized by Microsoft and Inside Sherpa on June 28, 2020.
 25. Certificate course in “**The fundamentals of Digital Marketing**” Conducted by Google Digital Garage on June 27, 2020.
 26. One day GIS workshop on Topic: “**Raster Data Analysis using QGIS**” organized by Swastik Edustart dated June 21, 2020.
 27. The first “**SuperMap**” Webinar Bangladesh organized by SuperMap Software Co., Ltd on June 19, 2020.
 28. Certificate Program on “**Data Analysis in R** using STATCRAFT” on June 2-4, 2020.
 29. Two day’s workshops on ‘Introduction to GIS and Python’, at Swastik Edustart, Delhi, 2020.
 30. One day workshop on ‘**Learn QGIS in one day**’ at Swastik Edustart, Delhi, 2020.
 31. Two days’ workshop on the role of ‘**Geospatial Technology in Earth Science**’ at Swastik Edustart, Delhi, May 4 to 5, 2019.
 32. UGC-DRS-I sponsored one-week research methodology workshop on ‘**Geography and Environment with SPSS**’ at Dept. of Geography, J.M.I, Delhi, March 1-7, 2019.
 33. Three days ‘**Bhuvan overview training**’ at National Remote Sensing Centre, (ISRO, Dept. of space, Govt. of India), Balanagar, Hyderabad, India, February 26-28, 2019.
 34. One day workshop on ‘**Drone Surveying**’ under the initiative of ‘**Ignite the GIS spark**’ at Institute of Photogrammetry & Geo-Informatics, Dwarka Mor, Delhi, February 2, 2019.
 35. One day workshop on ‘**National Information system for Climate and Environment Studies (NICES) and its activities**’ National Remote Sensing Centre, (ISRO, Dept. of space, Govt. of India) at Dept. of Geography, Jamia Millia Islamia, New Delhi, January 29, 2019.
 36. Three days ‘**Training cum debate competition program on Climate Change Awareness**’ Integrated Research and Action for Development (IRADe), at J.M.I, Delhi, April 6-9, 2018.

37. The US department of state funded three days' workshop on 'WOMEN IN STEM ROADSHOW', Delhi, and February 2018.
38. One-week Training on 'Digital Image Processing, GIS & GPS' at Birla Institute of scientific Research, Jaipur, Jan 31st to February 3, 2018.
39. Two years English Language Study Program "Access" at U.S Embassy and J.M.I, Delhi, Batch 2006-08.
40. '9 days special National Service Scheme (NSS) Camp' at Faculty of Education, J.M.I, Delhi, November 30 to December 9, 2011 and December 12-19, 2012 sponsored by Department of Youth Affairs & Sports, Govt. of India.

Participation in National and International Events

- Youth Adda on creating A World For all Ages to commemorate International Youth Day 2022, at United Nations House, New Delhi, August 12, 2022.
- Screening and Discussion: Faces of Climate Resilience, co-hosted by Belongg and CEEW on November 4, 2022.

Technical Expertise: -

Software Application: Working experience with ArcGIS, QGIS, MAP INFO, GLOBAL MAPPER, ERDAS imagine, Bhuvan Portal, Google Earth, Google Earth Engine, JASP, SPSS, XLSTAT, R-studio, PyCharm community, HAC-RAS, HAC-GeoRAS, STATCRAFT, Super Map, Google Street Map, AutoCAD, SAS, Epi Info™, Stata, Cloud Computing, Open-source software, Microsoft Excel, PPT and MS Word, Google sheet, Google doc, Google Slide, Canva.

Languages: HTML, JAVA, R, Python.

Geospatial Skills:

Spatial Data creation: Data capturing; data import & export, spatial and attribute data creation; Geodatabase creation and management; Digitization; Geo-referencing

Spatial Data Analysis: Terrain mapping; Digital Elevation Model; Contour Mapping, Layout Mapping, Digital image processing techniques: IDW, NDVI; NDSI; MDII; NDMI; NBR; SAVI; NDBI etc., LULC mapping: Supervised, Unsupervised, Object-Oriented Classification etc.

Analysis techniques: Overlay, Proximity, Buffer; modelling spatial relationship using exploratory regression, ordinary least square, geographic weighted regression; Mapping clustering using hotspot analysis and optimize hotspot analysis etc. Site suitability analysis; (Hazard such as landslide, flood, fire, climate change, epidemic, earthquake susceptibility, Inventory and Risk Mapping, Disaster Temporal Change Detection; Trend analysis, Groundwater Potential Index (GWPI), Water Quality Index (WQI), Groundwater Vulnerability Assessment using DRASTIC Model, Analytical Hierarchical Process (AHP), Principal Component Analysis (CA), Covariance Analysis (CA) etc, DSAS, CA MARKOV, MOLUSCE, AI Models.

Statistical Skills

Data Wrangling: data editing, manipulation, and structuring.

Data Snooping Exploratory Data Analysis:

Data Visualization: Bar charts, Histograms, Pie charts, Line graphs, Waffle, Scatter plots.

Descriptive Statistics and Modeling: Measures of Central Tendency, dispersion, variability etc.

Exploratory Statistics: t-test, ANOVA, ANCOVA, MANCOVA, Factor Analysis, K mean clustering, Survival Analysis, Correlation, Regression T Square Test, Z Square Test, chi-square, flood frequency analysis; Gumbles equation for floods, Exceedance Factor etc.,

Statistical Modelling, Interpretation.

Predictive Modeling: Structured data > data model. Text analysis > data mining.

Machine Learning: Supervised and Unsupervised training.

Deep learning and big data analysis techniques: Currently exploring and using.

IOT: Currently exploring and using.

Artificial Intelligence: Learning Phase

Experience –

1. Guest Lecturer (Geography), Centre for Distance and Open Learning (CDOE) in Jamia Millia Islamia. Semester 1, 2023-24.
2. Guest Lecturer (GIS), Department of B.VOC, Software Development, Ramanujan College, Delhi University from July 20 to November 16, 2022.
3. Worked as Business Development Trainee in GarudaUAV, Noida from July 1 to August 1, 2022.
4. Teacher, Poineer Coaching, Jamia Nagar, from September 2021 to June 30, 2022.
5. Junior Consultant for the Compilation Work of Indian Disaster Report 2021, NIDM, India from February 3 to April 3, 2022.
6. Research and Development Team. ECELL JAMIA, 2021.
7. Freelancer in ICiTifield, May 2021.
8. Ph.D Guest Lecturer (Geography), Department of Geography, Jamia Millia Islamia, (2020-21, 2021-22)
9. Trustee of an NGO, ZARIYA, based on Delhi. <https://findsun.net/zariya-the-way-of-serving-17417879>

10. Content Developer and Reviewer in Epsilon Learning Solution, 2020 to 21. <http://www.epsilonlearningsolution.com/>
11. Teacher and Resource Person, Project Smile, Healthcare Helping Hands, Ganesh Pura,Trinagar, New Delhi-110035, July 1, 2017 to December 30, 2020.
12. Survey Executive, Ministry of Statistics and Programme Implementation, Govt. of India, Reg. No. 507059614741904.
13. Field Surveyor, Directorate of Economics & Statistics, Govt. of NCT of Delhi, Delhi, 2018 to 2019. Completed enumeration for EB No. 69 of 100-S ward, Zakir Nagar and the work is highly appreciated and accurate.
14. Appointed as ‘Graduate Land Referencer’ in land referencing department at WSP India Private Limited, Noida- 201301, Canadian based Global Inc., April 12, 2018. Resigned to pursue higher studies.

Papers Taught

1. Introduction to Geographical Thought and Geomorphology, IGNOU, JMI, 2023-24.
2. Climatology and Oceanography, MA Geography CDOE, JMI 2023-24.
3. GIS, PGDRS CDOE, JMI 2023-24.
4. GIS, Department of B.VOC, Ramanujan College, Delhi University (2022)
5. RS and GIS in Soil, Agriculture, Water and Forest in M. Sc Disaster Management and Climate Sustainability Studies, Department of Geography, Jamia Millia Islamia, (2020-21).
6. Photogrammetry in PGDRS, Department of Geography, Jamia Millia Islamia, (2020-21)
7. Fundamentals of RS & GIS in PGDRS, Department of Geography, Jamia Millia Islamia, (2020-21)
8. Basic Mathematics and Statics in B. A/B. Sc (Hons) Geography, Department of Geography, Jamia Millia Islamia, (2020-21, 2021-22)
9. Image Interpretation in B. A/B. Sc (Hons) Geography, Department of Geography, Jamia Millia Islamia, (2020- 21)
10. Hydrology in B. A/B. Sc (Hons) Geography, Department of Geography, Jamia Millia Islamia, (2020-21)
11. Geography of India in B. A/B. Sc (Subsi) Geography, Department of Geography, Jamia Millia Islamia, (2020- 21).
12. Geography of Resources in B. A/B. Sc (Subsi) Geography, Department of Geography, Jamia Millia Islamia, (2020-21)
13. Mapping of Socio-economic Data in B. A/B. Sc (Hons) Geography, Department of Geography, Jamia Millia Islamia, (2020-21)
14. Rural Geography in B. A/B. Sc (Hons) Geography, Department of Geography, Jamia Millia Islamia, (2021-22).

Ph.D./Project Assistance Provided to:

Himanshi Saini	Migration Route Mapping for Partition Museum
Vivek Kumar	Spatio-temporal distribution of the Scheduled Caste population in Uttar Pradesh. Department of Geography, Jamia Millia Islamia, 2023.
Neeraj Kumar	Impact of Air Pollution on Human Health in NCT Delhi. Department of Geography, Jamia Millia Islamia, 2023.
Nirshobha Bhuyan	Flood Susceptibility Analysis Department of Geography, Jamia Millia Islamia
Nida Rizvi	Flood Susceptibility Analysis Working Profession
Nidhi Sachdeva	FESTIVAL AND URBAN SPACE Department of Architecture, JMI
Dr. Usha Rani	Occupational Health Hazards of Ragpickers in NCR Region of Uttar Pradesh, India. Delhi University
Miss. Nida Fatima Quraishi	Half Widows in Islamic Jurisprudence: a case study of Srinagar School of Humanities and Social Sciences, Jamia Hamdard
Prof. Haseena Hashia	Impact of War and Conflict on Women in Kashmir 1980-2018”. ICSSR Project. Department of Geography, Jamia Millia Islamia, India (2 Nov 2021).
Mrs. Ayesha Bibi	Effect of Training in English Reading Comprehension Ability on the Development of Self-Concept of Children with Specific Learning Disabilities”. , Department of Education, Amity University
Mr. Vikas	Gender Inequalities in Rajasthan: A Spatio-Temporal Analysis. Department of Geography, Jamia Millia Islamia, India (2 Nov 2021).
Mr. Shoeb Ahmed	Assessment of Forest Fire in Almora District. Department of Geography, Jamia Millia Islamia, India (2 Nov 2021).
Miss. Navneet Kaur	Maternal Healthcare in Rajaouri District. Department of Geography, Jamia Millia Islamia, India (2 Nov 2021).
Mr. Sohidul Islam	FLOOD RISK ZONATION, VULNERABILITY, AND IMPACT ASSESSMENT: A CASE STUDY OF LOWER BAGMATI RIVER Department of Geography, Jamia Millia Islamia, India (23 October 2021).
Mr. Umesh Chandra	Assessment of Groundwater Quality of Bhagwanpur Block, Haridwar. Department of Civil Engineering, Uttarakhand Technical University, India.

Mohammad Tayyab	Physical Activity, Built Environment, Socio-demographic settings in the Public Health Domain. Department of Geography, Jamia Millia Islamia, India (Dec 2020).
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Dissertations Supervised: -

Name and Class of the student	Topic:
Miss. Shehnaz Begam (M.A/M.Sc.-2019)	‘URBAN FIRE HAZARD IN DELHI-PERCEPTION TOWARDS FIRE SAFETY’.
Miss. Vedika Maheshwari (M.A/M.Sc.-2019)	Socio-economic Survey on Dhar Village, Rajasthan’.
Miss. Pooja Jain (M.A/M.Sc.-2018)	Assessing the Health Impact of Incinerator; Case Study of Okhla Waste Management Plant, South-east Delhi’.

School, UG and PG Level Research Projects: -

- Name of the Supervisor: Dr Taruna Bansal, Dept. of Geography, J.M.I, Delhi.
M.A/M.Sc. Dissertation on ‘**Disaster Risk Reduction with respect to Chemical Hazards in Jamia Millia Islamia Campus**’, 2018.
- Name of the Supervisor: Prof. Hasina Hashia and Prof. Mary Tahir, Dept. of Geography, J.M.I, Delhi.
M.A/M.Sc. field survey on ‘**Socio-economic survey on Pipaka village**’, 2017-18.
- Name of the Supervisor: Prof. Atiqur Rahman, Dept. of Geography, J.M.I, Delhi.
B.A/B.Sc. Dissertation on ‘**Assessing socio-economic and housing conditions in Ghaziabad City**’, 2016.
- Name of the Supervisor: Prof. Haroon Sajjad, Associate Prof. Lubna Siddique, and Dr. Muqet, Dept. of Geography, J.M.I, Delhi.
B.A/B.Sc. field survey on ‘**Socio-economic survey on Khizrabad village**’, 2015-16.
- Name of the Supervisor: Prof. Jaseem Ahmed, Dept. of Teachers training and non-formal education, J.M.I, Delhi.
Diploma in E.T. E project on ‘**Assessing health impacts of using iodised salt**’, 2013.
- Name of the Supervisor: Prof. Roohi Fatima, Dept. of Teachers training and non-formal education, J.M.I, Delhi.
Diploma in E.T. E **Action Research on ‘extra-ordinary student**’, 2012.
- Name of the Supervisor: Miss Shama Parveen, Jamia Middle School, Delhi.
Extra-Curricular Activity, ‘**Exhibition on Ocean**’, 2005.

Others (selected):

- *Member*, editorial board ‘**GEOCORE**’ magazine, Dept. of Geography, Faculty of Natural Sciences, Delhi, 2018.
- *Vice- President* and *class representative*, Jamia Geography Association, J.M.I, Delhi, 2018.
- *Joint secretary* and *class representative*, Jamia Geography Association, J.M.I, Delhi, 2016.
- *Volunteer*, Jamia Geography Association, Dept. of Geography, Faculty of Natural Science, J.M.I, Delhi, 2013-18.
- House Representative, ‘*Campus Renovation during NSS camp*’, Dept. of Teachers Training and Non-Formal Education, Faculty of Education, J.M.I, 2012-13.
- *Member*, editorial board for wall magazine ‘*Vulnerable Children*’, Dept. of Teacher Training and Non-Formal Education, Faculty of Education, Delhi, 2013.
- Participated and got many prizes in curricular and Extra-curricular activities at school, Diploma in E.T.E, graduate, post graduate level.
- Attended numerous seminars and lectures organized by Jamia Millia Islamia University during 2007-2018, and Dept. of Geography, J.M.I since 2013.
- Event organizer of School and University functions.

Declaration:-I do hereby declare that all the above information provided by me is true to the best of my knowledge and can be proved when required.

Place: New Delhi



(Sana Rafi)