


Swati Uniyal

M.Tech (Remote sensing and GIS-IIRS, Dehradun, India)

7 years 5 months experience- Remote Sensing and GIS-Technical and Interpersonal skills- Demonstration ability- Data collection and analysis- Extensive experience of working with scientific and research team-Team player and leader-Dedicated and Passionate Researcher



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TOP SKILLS

Image Processing

Cartography and Maps

RS/GIS modelling

Automation in GIS

Spatial Analysis

Statistical Analysis

Presentation & Demonstration

Team management

Project management

Supervision skills

WORK EXPERIENCE

✓ Research Scientist

National Remote Sensing Centre, ISRO

August 2013 – August 2018

Hyderabad, Telangana

Professional Summary: Worked on National Project: Space Based Information Support for Decentralized Planning (SIS-DP) and Empowering Panchayati Raj Institutions Spatially (EPRIS) initiated by ISRO (NRSC) to empower Panchayati Raj Institutions with space based inputs towards resource based and integrated spatial development planning of rural areas in user-friendly enabling environment.

Achievements/Tasks

- Contributed in generation and handling of dynamic large scale thematic GIS Database repositories (RDBMS/DBMS).
- Generated raster database 10m Digital Elevation Model with slope, Orthorectification, Satellite Image fusion.
- Generated repositories for Raster and Vector data and quality control assessments of the data while Consolidating inputs from multiple partner institutions.
- Contributed towards design and development of web-GIS portal for data dissemination.
- Worked with information extraction from raster/vector database through GIS modelling for informed decision-making in Natural Resources Management.
- Played key role in project progress monitoring of different Space Remote Sensing Application Centres (SRSACs) and Academic institutes.
- Contributed for Quality check of Assets mapped on field by SRSACs and Academic Institutes.
- Interpreted research findings and summarized data into reports for different Ministries of India.
- As a part of project developed several modules/products/services of ISRO for general public use.
- Worked with several teams across the country from various regional application nodes of ISRO.
- Trained and delivered technical workshops to researchers, students and domain professionals.

✓ Research Fellow

Indian Institute of Remote Sensing, ISRO

February 2013 – August 2013

Dehradun, Uttarakhand

Professional Summary: Worked on National Project: National Carbon Pool Monitoring initiated by ISRO for assessment of C Pools, Fluxes and Net C balance for terrestrial biosphere in India.

Achievements/Tasks

- Worked for generation of remote sensing based spatial databases observational network for

assessment and modelling of Carbon cycle supported by field observations.

- Worked for handling of dynamic GIS database and their repositories (RDBMS/DBMS).
- Proposed ~10000 sample plots for field inventories with help of High resolution satellite data, Vegetation Indices, Thematic layers, Forest type map and forest density map.
- Actively participated in Conduction of field trainings for forest field inventories to other collaborative Institutions.
- Worked with various field related instruments and conducted training to other collaborative Institutions.
- Interpreted research findings and summarized data into reports for other institutions and UNFCC.

✓ Research Fellow

Uttarakhand Space Application Centre

November 2010 – October 2012

Dehradun, Uttarakhand

Professional Summary: Worked on Various Projects: Landuse Land Cover mapping for Uttarakhand State, NATCOM, and Web based School information system

Achievements/Tasks

- Contributed for Satellite data procurement, Image Correction, Digital Image Processing and Analysis.
- Interpreted research findings and summarized data into reports for Ministry of Uttarakhand India.
- Worked for quality control assessments for geocoded products.
- Generated point based spatial and non-spatial database for all the schools of Uttarakhand state.
- Generated road network and network analysis for whole Uttarakhand state.
- Contributed towards design and development of web-GIS portal for data dissemination of web based School information system.
- Worked for Change dynamics of Land Use/Cover with major emphasis on Forest and Settlement for Dehradun district.

EDUCATION

-Doctor of Philosophy (PhD)

Andhra University

Pursuing

Major

- Urban forest assessment using Remote Sensing/GIS

Visakhapatnam, Andhra Pradesh

-Master of Technology (M.Tech)

Indian Institute of Remote Sensing, ISRO

Completed

Major

- Remote Sensing and GIS

Dehradun, Uttarakhand

-Master of Science (M.Sc)

Gurukul Kangri University

Completed

Major

- Environmental Sciences

Haridwar, Uttarakhand

INTERNSHIP EXPERIENCE

-M.Tech Degree Research work

Indian Institute of Remote Sensing, ISRO

Dehradun, Uttarakhand

12 months duration

Main project features: Quantitative assessment of biomass and carbon for whole Madhya Pradesh state using satellite data as well field data.

Tasks/Achievements

- Assessments of forest cover dynamics of past 100 years.
- Geospatial analysis of phytomass and carbon distribution pattern in forest ecosystems of Madhya Pradesh India.
- Large Scale modelling for phytomass and carbon dynamics in Madhya Pradesh.

-M.Sc Degree Research work

Wadia Institute of Himalayan Geology

Dehradun, Uttarakhand

4 months duration

Main project features: Climate variability of Doon Valley of past 75 years

Tasks/Achievements

- Collection of climatic parameters (Temperature, rainfall, humidity, relative humidity, sunshine hours evapotranspiration, number of sunny days etc.) Of Doon valley from weather stations located in Doon area.
- Statistical analysis of various climatic parameters of past 75 years and their correlation with various Pollutant gases in the area and along with various types of allergic conditions affecting local people in the area.

ACHIEVEMENTS

- Certificate holder of Helpage India for contribution for Social service.
- Special effort certificate in Interschool on the spot painting competition.
- Second prize in "Shree Geeta Ramayan Pariksa samiti" Geeta Bhavan, Rishikesh.
- Gold and Silver medallist of various sports during Sports week function held at Forest Research institute, Dehradun.
- Student Teaching assistance ship during M.Tech for three months as a training instructor of CSSTEAP students.
- 12 months fellowship during M.Tech while working for National Carbon Pool Project.
- Photon Young Scientist Award 2014.
- First prize for best exhibitor as an ISRO representative at 'Bhopal Vigyan Mela'. 2016.
- Received travel grant to present research at American Geophysical Union ,USA (2017,2018 and 2019)
- Received travel grant to present research at Japan Geoscience Union, Japan 2019.

MEMBERSHIP

Indian Society of Geomatics (ISG), Tropical Metrology, AGU

TECHNICAL SKILLS

Office
Desktop GIS Software
Image Processing Software
Database management & Sharing
Web-mapping
Programming language
Statistical Software

MS Office Suite
ArcGIS, ArcGIS Pro, QGIS, SAGA GIS
ERDAS, ENVI, eCognition, IDRISI, PCI Geomatica
PostgreSQL, SQL
GeoServer
R (Studio, Console), Python
SPSS, Statistica