Kapil Thakur
PG (II Year I Semester)
M.Tech. (Geospatial Engineering)
Contact No: 8894933769
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Registration No: 23569005/2025

Indian Institute of
Technology
Roorkee

Area of Interest

Remote Sensing, Computer Vision, Photogrammetry, Artificial intelligence(ML/DL), Geoinformatics, Civil engineering

Education

Year	Degree/Examination	Institution/Board	CGPA/Percentage
2024	M.Tech. 1st Year	Indian Institute of Technology, Roorkee	7.800
2021	Graduate (UG)	National Institute of technology Hamirpur	7.510
2017	Intermediate (Class XII)	Sigma School of Science Dakoler Rampur Bushehar Shimla Himachal Pradesh	75.40 %
2015	Matriculate (Class X)	S Vidya Mandir Nirmand District Kullu Himachal Pradesh	82.40 %

Experience

Apprentice/Trainee | SJVNL   June 2022 - June 2023
- Was working as a junior field engineer in Hydroelectric Project Company SJVNL for the duration of one year.

Projects

An End-to-End Approach to Reconstructing 3D Model using Novel View Synthesis | Indian Institute of Technology Roorkee   September 2024 - May 2025
- Developing a full pipeline for 3D recon- struction using NVS. The goal is not just high-fidelity views but also outputting traditional mesh-based formats that work with simulation, modeling and BIM software. Recent SOTA technique NeRF and Gaussian splatting are powerful, yet they dont directly lend themselves to mesh production due to their emphasis on view-dependent representation rather than ex-plicit geometry.

GeoSAM-2 GeoSAM Enhanced with SAM 2: Fine-Tuned Automated Segmentation for Geospatial Data" | Self Project   July 2024 - Present
- Integrating SAM 2 into GeoSAM: Advanced Data Annotation for Geospatial Applications

Comparison of spectral response curve from Spectro radiometer and satellite data | Indian Institute of Technology Roorkee   April 2024
- Studies and compared the spectral response curve obtained from a Spectro radiometer and Sentinel 2 data.

To estimate coal mine subsidence using Differential SAR Interferometry | Indian Institute of Technology Roorkee   March 2024
- SAR Data Preprocessing and estimate coal mine subsidence using Differential SAR Interferometry using SNAP

Topography survey Chandi Ghat area, Haridwar in Indian Institute of Technology, Roorkee. | Indian Institute of Technology Roorkee   December 2023
- Performed the GPS and Total station-based survey to prepare the topographical map of Chandi Ghat, Haridwar, Uttarakhand.

Different modes of GPS surveying conducted at IIT Roorkee. | Indian Institute of Technology Roorkee   September 2024 - October 2024
- RTK, DGPS, and handheld GPS were used to conduct a survey at the campus.

Watershed Delineation, LULC Mapping and LULC change detection was done using Remote Sensing and GIS | NIT Hamirpur   January 2021 - May 2021
- The Study was focused on the upper Beas River watershed in the upper valley of Kullu district. A compete methodology was formed and LULC change detection was done for the period of 20 years using Landsat Satellite data.

Awards / Scholarships / Academic Achievements

- Inter Bhawan Sports Genral Championship (Gold in: Yoga)
- Top 10 Finisher Fit India Marathon Position: 8th | Finish Time: 45 minutes| April 17, 2024 IIT Roorkee

Skills

Computer languages	Python, SQL, HTML, CSS
Software Packages	AutoCAD, Revit, Microsoft 365, STAAD Pro, ArcGIS, QGIS, Erdas Imagine, SNAP, Pix4d, MeshLab, CloudCompare,
Additional Courses	1) TensorFlow 2 QuickStart for beginners 2) QGIS 3.10 LTR for GIS - Udemy 3) Prompt Engineering for Everyone by IBM 4) Neural Networks and Deep Learning by DeepLearning.ai 5) A Crash Course in Data Science by John Hopkins University 6) MATLAB Onramp (Basics of MATLAB) 7) Introduction to Data analysis using Excel 8) Crash Course on Python by Google 9) Technical Support Fundamentals by Google
Languages Known	Hindi, English

Positions of Responsibility & Extra Curriculars

ICGCE 2024 Student Coordinator | Geomatics Engineering Group, IIT Roorkee   December 2023 - March 2024
- Organized and hosted the [ICGCE 2024], leading a team in the successful execution of the event, including managing logistics, coordinating with speakers, and engaging participants.

Teaching Assistant (CEN-512) | Geospatial Engineering, IIT-Roorkee   August 2024 - Present
- Performing TA duties, managing and conducting practical labs for the subjects of Photogrammetry for Geospatial engineering, Geodata processing for Disaster management and Geomatics for Civil engineering.

References

Dr. Kamal Jain
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Dr. Saurabh Vijay
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