

BIPUL KARNA

Bachelor of Technology
Civil Engineering
Motilal Nehru National Institute of Technology Allahabad, Prayagraj

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GitHub Profile
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EDUCATION

- Motilal Nehru National Institute of Technology Allahabad, Prayagraj** 2020-2024
B.Tech in Civil Engineering CPI: 7.47/10
- St. Xavier's College, Kathmandu** 2017-2019
XI and XII - NEB/HSEB, Nepal CGPA: 3.51/4
- Geetamata Higher Secondary School, Kathmandu** 2017
X - SEE/SLC, Nepal CGPA: 3.75/4

PERSONAL PROJECTS

- Drone Technology for Surveillance and Mapping of any given site**
Utilize Drone Technology to Efficiently Map and Generate an Orthomosaic Map of the MNNIT Academic Campus.
 - **Drone Used:** ideaForge Q6
 - **Software Used:** QGIS (GIS software to create thematic layers and helpful in analysis of thematic layers), BlueFire Touch (GCS Software to plan and command the Drone for mapping), BlueFire Map Assist (Geotagging software for PPK mapping), Agisoft Metashape (photogrammetric kit for high-resolution textured polygonal model generation, detailed orthophotos, and digital elevation models).
- Surveying and mapping of MNNIT Campus**
Complete survey mapping of MNNIT Academic Campus using Plane Table Survey, Auto-level, Total Station for elevation.
 - To know the RL and with the help of total station, we can also find the latitude and longitude along with elevation of various points and understand the concept of how to measure the elevation, Reduced Level (RL), rise and fall of various places.
 - Learn how to operate various Surveying instruments like Auto level, Total Station, etc.

PUBLICATIONS

R. D. Gupta, K. Yaswanth, P. C. Sharma, B. Karna, M. Kushwaha and H. Kumar, "Mapping of Academic Campus of MNNIT Allahabad (India) using ideaForge Q6 Quadcopter Small Category Drone/ UAV," 2024 IEEE India Geoscience and Remote Sensing Symposium (InGARSS), Goa, India, 2024, pp. 1-4, doi: 10.1109/InGARSS61818.2024.10984088,

TECHNICAL SKILLS AND INTERESTS

Programming Languages: Python(NumPY, OpenCV), Basics of C, SQL
CAD Software Tools: AutoCAD 2D, STAAD Pro, Fusion 360
Technical Skills: Agisoft Metashape, SW Roads, QGIS, MATLAB, Microsoft Power BI
Soft Skills: Project Management, Team Collaboration, Interpersonal Communication
3D Printing Software: Ultimaker Cura (3D Printing Slicing Software)
Areas of Interest: Traffic Engineering, Structural Engineering, Geographic Information System(GIS)

POSITIONS OF RESPONSIBILITY

- Club Coordinator** of Robotics Club, Astronomy Club MNNIT.
- Mentored** 2nd-year students on different robotics-related projects ranging from software and hardware.
- Coordinated and Organized** BotRush'23 and BotRush'24 event of Technical Clubs MNNIT exclusive for 1st and 2nd-year students, attracting nearly 1000 individual registrations.
- Departmental Coordinator** of Technical Clubs (Robotics, Astronomy, and Aeronautics) in Avishkar'24.

ACHIEVEMENTS

- 2nd Place** in AtomQuest Home Automation Competition, Techfest 2023, IIT Bombay.
- 4th Place** in LINKIDGE Bridge Model Building Competition, Avishkar'22.
- 1st Place** for Methane Gas Detection Project showcased at Inter College National SET Exhibition out of 100+ teams.