

ABHISHEK MUGALAKHOD

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Professional Portfolio 🔗 Explore My Projects & Work

EDUCATION

RV College of Engineering <i>B.E in Civil Engineering(Honours)</i>	2022 - 2025 <i>CGPA: 9.2 — Ranked 3rd in Civil Branch</i>
K L E SOCIETY's Polytechnic <i>Diploma in Civil Engineering</i>	2019 - 2022 <i>Percentage : 95.32</i>
Morarji Desai Residential School <i>Class X</i>	2018 - 2019 <i>Percentage : 85.6</i>

EXPERIENCE

Environmentalist (Research Engineer) - Environmental Risk Management <i>(Fluidyn Consultancy Pvt. Ltd.)</i>	20 Jan 2025 - Present <i>Bengaluru</i>
- Created contour Maps and 3D terrain Models in QGIS using the DEM data, and downloaded high Resolution raster maps for multiple projects. - Conducting wind dispersion modeling for the Pauillac harbour case to assess hazardous gas dispersion and potential consequence zones. - Executed 2D and 3D Quantitative Risk Assessment (QRA) for Adani's Mundra Petrochem Limited, identifying hazard zones and ensuring compliance with safety regulations and process risk standards. Conducted real-time software validation for Gujarat Narmada Valley Fertilizers (GNFC), where sensor-driven weather and plant data were integrated to automatically detect potential hazard events (e.g., fire, explosion) and trigger precautionary control measures to reduce risk impact.	
Intern at Bangalore Metro Rail Corporation Limited (BMRCL) <i>(Contruccion of Anjanapura Metro Depo)</i>	Oct 2024 - Nov 2024 <i>Bengaluru</i>
- Acquired comprehensive insight into the execution and fabrication of structural elements, encompassing pile foundations, retaining walls, and pre-engineered buildings (PEBs). - Observed methodologies for Earthwork, Concrete casting of Girder, Reinforcement placement. - Coordinated with engineers to address site-specific challenges and implement effective solutions to ensure project continuity.	
STAAD Pro Project Intern <i>Public Works Department(PWD)</i>	Nov 2023 - Dec 2023 <i>Bengaluru</i>
- Analyzed and designed a G+3 Government Hostel, including architectural plans with AutoCAD drawings. - Modeled the structure using STAAD Pro and conducted load calculations for accurate structural assessments. - Assigned and evaluated various loads on the structure to ensure safety and stability.	

PROJECTS

Design for a Rooftop Office Extension <i>(K R Puram)</i>	Sep 2025- Present <i>Bengaluru</i>
- Spearheaded the complete design and adaptive reuse of a residential rooftop, transforming it into a three-unit commercial office workspace. - Engineered a lightweight, climate-responsive structure and optimized spatial plans to maximize functionality, natural light, and workflow efficiency. - Planned the full interior design, creating a modern, professional aesthetic with layered lighting, as demonstrated in detailed day/night 3D visualizations. - Produced detailed 3D visualizations to effectively communicate design concepts and secure client approval.	
Urban Heat Island Analysis	Present
- Quantify and analyse the spatiotemporal patterns of Urban Heat Island (UHI) intensity in Bengaluru over the past decade using multi-temporal remote sensing data. - Assess the relationship between UHI and key biophysical indicators such as Normalized Difference Vegetation Index (NDVI) and Normalized Difference Built-up Index (NDBI) for understanding the influence of land cover dynamics.	

- Develop a predictive model for Land Surface Temperature (LST) and UHI trends using geospatial and statistical tools, and project the urban thermal environment for future trends.
- Validate the model’s predictive performance through comparative analysis with historical data and evaluate its applicability for urban climate resilience planning.

Integrated Watershed Management and Silk Cocoon Wastewater Assessment for Sustainable Water Resource Development

Nov 2024

- Conducted a comprehensive study that integrates morphometric analysis of the Arkavathi River Basin using QGIS with the water quality assessment of **Silk Cocoon wastewater**, aiming to support sustainable water management practices.
- Simultaneously analyzed the **chemical and physical properties** of wastewater from the silk cocoon industry to evaluate its environmental impact.
- The results showed **no major harm** to the environment. Letting the water flow into nearby rivers does not cause serious problems.

SKILLS

Software:QGIS,AUTOCAD, REVIT, STAADPRO,CANVA.

Hobbies: Fitness Enthusiast, Listening to Podcasts, Reading self help books, Listening to Music.

Languages: Kannada, English, Hindi

CERTIFICATIONS

Principles of Construction Management, <i>NPTEL (IIT Kanpur)</i>  <i>Link</i>	Sep 2023
Building Information Modeling (BIM) using AUTODESK REVIT  <i>Link</i>	Aug 2023
Microsoft Certified: Azure AI Fundamentals  <i>Link</i>	Sep 2024

ACHIEVEMENTS

Second Prize in State Level Surveying Competition	2024
First Prize in State Level Technical Paper Presentation	2022