



MAHENDRA SINGH

B.Tech – Civil Engineering

Gender: Male

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Educational Qualification

Year	Degree/Examination	Institution/Board	CGPA/Percentage
2022-Present	B.Tech – Civil	NIT, Trichy	9.63
2021	Class XII	Matrix High School, Sikar (Rajasthan), RBSE	94.8%
2019	Class X	Government Senior Secondary School Mundiawas, Sikar, RBSE	87%

Academic Achievements

- Awarded the **Recal 1979 scholarship** at NIT Trichy for being a meritorious student.
- Represented Rajasthan at the National Level in the **2018 Science Fair**.
- Awarded a laptop from RBSE board for being among the top students in 8th grade.

Projects

- **Structural Design and Analysis of G+4 Military Dwelling Unit | Delhi Outskirts** *Oct 2024*
 - Performed structural analysis and design using STAAD Pro for frame modelling and worked in accordance with the IS codes for gravity load conditions only.
 - Designed slabs manually and created a detailed **Excel-based model** for sizing and reinforcement detailing of footing.
 - Estimated total quantities in the **bill of materials**, achieving approximately **350 m³ of concrete** and **30 tonnes of steel** for the entire structure (including frame, slabs, and footings).
- **Analysis of Water Distribution Network at NIT Trichy using EPANET** *April 2024*
 - Conducted hydraulic modelling and simulations to analyse pressure, flow rate, and velocity in the campus water distribution network.
 - Collected data to optimize pump operations, reducing energy consumption and operational costs.
 - Conducted time series analysis to understand and forecast hourly water demand patterns.
- **Vermicompost Production Enhancement** *May 2023*
 - Developed an Arduino-based system to control temperature for optimal vermicompost production.
 - Activated a cold-water sprinkler system automatically when temperatures exceeded 30°C.

- Designed to monitor and maintain optimal environmental conditions for earthworm growth.
- A comparative analysis showed higher vermicompost volumes using the smart method versus traditional methods.

Technical Skills and Certifications

- Programming Languages : Python
- Engineering Software : AutoCAD, EPANET, Staad Pro
- Other Software : Microsoft Word, PowerPoint, Excel

Positions of Responsibility

- **Financial Analyst, ProfNITT (Finance and Investment Club)** *Oct 2023 – Present*
 - Focused on generating returns by trading in stocks poised for quick exponential moves.
 - Conducted swing trades based on daily timeframe analysis, using price action and volume analysis.
 - Achieved a 26% return in 6 months through strategic investments and market analysis.
- **Workshop Manager, Civil Engineering Association (CEA)** *Dec 2023 – Present*
 - Led and organized three key workshops: Tekla Structures, SAP2000, and Bureau of Indian Standards.
 - Planned and executed detailed workshop schedules, ensuring content was tailored to audience needs.
 - Managed all logistical aspects, from registration to venue setup, ensuring seamless execution.
- **Marketing & Content Manager, AAYAAM - The Hindi Cell of NITT** *July 2024 – Present*
 - Led the Kite Flying Event on Independence Day 2024, promoting unity and patriotism, achieved over 200 footfalls.
 - Headed the dance competition at Umang 2024, managing event coordination and execution.
 - Led marketing for AAYAAM, organizing and promoting various cultural and literary events.
 - Developed engaging social media content and community greetings.
- **Manager, Akkara (Agricultural Club)** *August 2024- Present*
 - A student interest group at NIT Trichy aimed at virtually creating awareness about available technologies, policies, financial tools, and insights on organic farming among students, to improve the conditions of farmers and consumers.
 - I secured 1st position in Akkara's Event, Spring seed competition.
- **Manager, NSS(National Service Scheme)** *July 2024 - present*
 - Organized blood donation and eye-checking camps, supporting healthcare initiatives on campus as well as in adopted villages.
 - Managed volunteer teams, ensuring smooth execution of community outreach programs and fostering a culture of social responsibility.

Extracurricular Activities

- **Social Activities:**
 - Appointed as the Brand Ambassador for the **Rajasthan Legislative Assembly Elections-2018** of my village, leading voter awareness campaigns.

- Passionate about animal welfare, provided medicine to sick dogs on campus with the Prakriti team, contributing to their health and well-being.
- Volunteered for the NSS team during Convocation 2024.
- Volunteered during Orientation 2023.
- Volunteered for the Jaipur Marathon, one of India's largest charity platforms, to raise funds for NGOs.
- Volunteered to teach BPL (Below Poverty Line) children for 2 months during the summer break.
- **Sports Activities:**
 - Successfully completed the Marathon (Men) event in **Sportsfete'24**, the inter-department sports fest organized by NIT Trichy.
 - Participated in the **Cyclothon** during Pragyan and completed the race successfully.