



SARVAJANIK UNIVERSITY
Sarvajani College of Engineering and Technology



Civil Engineering Department

B.Tech. II, III, IV (Civil) & M.Tech- (Struct)
Academic Year 2025-26

A Report on

Hands on Workshop on Artificial Intelligence in Civil Engineering
August 18, 2025

No. of Students Participated: 112



The poster features a background image of a suspension bridge over water. At the top, it displays the Sarvajani Education Society logo on the left and right, and the Sarvajani College of Engineering & Technology Department of Civil Engineering in the center. Below this, it states '(NBA Accredited for 3 Years from Academic Year : 2023-24)'. The main title is 'Technical Workshop on Artificial Intelligence (AI) in Civil Engineering'. A circular portrait of the speaker, Er. Bhautik Kumar, is shown. To the right of the portrait, it lists 'Eminent Speaker: Er. Bhautik Kumar, Founder – Integrity World'. Below the portrait, the date '18th August, 2025' and time '9:30 AM Onwards' are given. The venue is 'N. J. Seminar Hall – 1st Floor, Admin Wing'. At the bottom, coordinators are listed: Dr. Jigar Sevalia (Professor, Department of Civil Engineering) and Dr. Minakshi Vaghani (Assistant Professor, Department of Civil Engineering). The Head of Department is Dr. Mehali Mehta, and the Principal is Dr. Hiren Patel.

Sarvajani Education Society
Sarvajani College of Engineering & Technology
Department of Civil Engineering
(NBA Accredited for 3 Years from Academic Year : 2023-24)

Technical Workshop
on
Artificial Intelligence (AI) in Civil Engineering

Eminent Speaker:
Er. Bhautik Kumar
Founder – Integrity World

Date:
18th August, 2025

Time:
9:30 AM Onwards

Venue:
N. J. Seminar Hall – 1st Floor, Admin Wing

Coordinators:

Dr. Jigar Sevalia Professor Department of Civil Engineering	Dr. Minakshi Vaghani Assistant Professor Department of Civil Engineering	Head of Department Dr. Mehali Mehta	Principal Dr. Hiren Patel
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In order to bridge the gap between theoretical contents and field practice, academic –industry consultant interaction is essential. In the era of digitalization, the students of civil engineers need to have knowledge of current practices of Artificial Intelligence adopted for various projects of Civil Engineering. In order to achieve this objective, we arranged Hands on Workshop on Artificial Intelligence in Civil Engineering on 18/08/2025. For this, we invited keynote speaker Mr. Bhautik Kumar, Founder, Integrity World. The said content was observed to be beneficial to students of B.Tech as well as M.Tech in Civil Engineering.





People in this Room

Judge
 Came to know
 Time Investors

Where Are You?

Problem is AI Will ~~Kill~~ your Job

But a Person Who knows AI Better than you, will ...

A.I. for me

- AI = **A**mplified **I**ntelligence
- AI = **A**uthentic **I**mpact
- AI = **A**ppplied **I**ntegrity
- AI = **A**lways **I**mproving
- AI = **A**spire + **I**nspire

DON'T BE CHEAP ON YOUR JOURNEY TOWARD GREATNESS

"AI IS THE NEW ELECTRICITY."

- Andrew Ng



SUNDAR PICHAI
CEO of Google
Cloud Next – Aug 2023

It is the most **profound shift**, we will see in our **lifetime**.

It will touch **every** sector, **every** industry, **every** business function, and **significantly change** the way we **live and work**.



BILL GATES
Founder of Microsoft

THE AGE OF AI HAS BEGUN
<https://www.gatesnotes.com/The-Age-of-AI-Has-Begun>

Artificial intelligence is as revolutionary as mobile phones and the Internet.

In my lifetime, I've seen two demonstrations of technology that struck me as revolutionary.



4-Step Formula to Create a Super Prompt

- 1. Define a Clear Role:**
a. Define the role you want ChatGPT to play as: a Social Media Manager, Physics Ph.D. Professor.
b. Example: "Act as a Structural Design Engineer with 15 years of experience in RCC construction."
- 2. Start with a Clear Instruction:**
Describe what you want ChatGPT to do: explain, provide a recipe, or guide through a process.
Example: "Explain how to design a slab for a residential building"
- 3. Specify the Context or Details:**
Include any preferences or ingredients you'd like to use.
Example: "Explain slab design considering Indian Standard Codes (IS456), M20 concrete, and Fe500 steel, for a 3m x 4m room."
- 4. Set the Desired Tone or Style (Optional):**
Mention any specific style, like "simple," "traditional," or "beginner-friendly."
Example: "Make the explanation beginner-friendly with formulas and calculation steps."

The Final Prompt :
"Act as a Structural Design Engineer with 15 years of experience in RCC construction and explain how to design a slab for a residential building using IS456 standards, M20 concrete, and Fe500 steel for a 3m x 4m room (**instruction**), in a beginner-friendly (**tone**) way with formulas and step-by-step calculations (**context**)."



4- Super Prompts

- 1. Soil Testing Report Interpretation:**
Act as a Geotechnical Engineer with 10 years of experience and explain how to interpret a standard soil testing report for a proposed building site in Gujarat. Use IS code references and explain in simple language for diploma students.
- 2. Quantity Estimation for a Building Project**
Act as a Quantity Surveyor and guide me step-by-step to calculate the material quantity for a 1BHK (6-7) house, including cement, sand, steel, and bricks, as per standard construction practices in India. Make it easy for beginners
- 3. Understanding AutoCAD Commands**
Act as a Civil AutoCAD Trainer and explain the top 15 AutoCAD commands every civil engineer should know, with examples of how to use them in building plan design. Keep the tone practical and easy to follow.
- 4. Difference Between RCC and Steel Structures**
Act as a Senior Structural Consultant and compare RCC structures and steel structures for a commercial building project. Highlight the advantages, disadvantages, cost factors, and suitability for different regions. Explain in a balanced and professional tone.

Mr. Bhautik Kumar has discussed various AI tools for the design of concrete elements and evaluation of soil properties. He also gave the information regarding writing of prompts. Our students enjoyed the live and interactive session on AI in Civil Engineering. At the end of workshop, a memento was offered to the invited speaker by our Head Dr. Mehali Mehta and Coordinators.

Our sincere thanks to our respected principal, **Dr. Hiren Patel** for his kind support, consent and inspiration, always. We are thankful to **Dr. Mehali Mehta**, Head, Civil Engineering Department, for encouraging us to execute this workshop. And last, but not least, we express our gratitude towards each and every individual who is directly or indirectly involved in executing this workshop. This was not possible without their efforts.

Report Compiled by
Dr. Jigar Sevalia
Dr. Minakshi Vaghani