

AYUSH SANDIPBHAI PATEL

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SUMMARY

A passionate and versatile professional with a bachelor's degree in construction technology and currently pursuing a Degree of Master of Science in Engineering in Construction Engineering and Management (MSE CE&M) at the University of Michigan, Ann Arbor with significant communication skills, experience of working in team, designing spaces, computer drafting, experience in software, quantity analysis, cost estimation and risk assessment analysis.

INTERNSHIP EXPERIENCE

[Trainee Engineer \(January 2024 - April 2024\) at Ranjit Buildcon, Gandhinagar.](#) ← **Report Link**

The internship was in the Package C-3 of phase-2 of the Ahmedabad Metro Rail Project (Motera stadium to Mahatma Mandir). It included training for planning, designing and managing the execution of the construction project with the contract cost of about Rs. 420 Crs. (\$50 Million) along with the quantity analysis, cost analysis and risk assessment analysis of the project items.

Teaching Assistant at CEPT University, Ahmedabad (July 2023 – December 2023)

The assistantship was for a 14-credit studio of Engineering Sustainability at CEPT University in monsoon 2023 semester. It included designing the course outline, exercises and assignments, teaching the students as well as grading the assignments.

EDUCATION

M.S.E. in Construction Engineering & Management (August 2024 - May 2026)

Department of Civil & Environmental Engineering | University of Michigan, Ann Arbor

Bachelor of Construction Technology (August 2019 - May 2024)

Faculty of Technology | CEPT University | C. G. P. A. – 3.6

SOFTWARE SKILLS

Computer Aided Design (Autodesk AutoCAD)
Building Information Modelling (Autodesk Revit, Navisworks)
3-D Modelling & Rendering (Sketchup, Lumion, Enscape)
Microsoft Office (PowerPoint, Word, Excel)
Project Scheduling (Microsoft Project, Primavera)
IES Virtual Environment
QGIS
Adobe InDesign
Adobe Photoshop
STAAD Pro

PRIME ACADEMIC PROJECTS

1. **[Construction Engineering for Mass Housing Projects Studio:](#)** Applied construction methodologies to 'The Castle' mass housing project, incorporating Modular Formwork System. Executed planning, design, cost and safety analyses.
2. **[Structural Expressions in Masonry:](#)** Designed a library and connecting exhibition space, showcasing masonry construction principles, featuring domes, vaults, arches, and buttresses.
3. **[Deployable Structures Studio:](#)** Created Flexolar, a solar shade generating energy. Utilized a steel structure with a tenfold scissor mechanism, aligning solar panels to the area's latitudinal degree for optimal energy generation.
4. **[Designing Spaces in Steel Studio:](#)** Extended the library on a 25m x 25m plinth, employing design principles. Manually analysed the structural system, cross-verified using STAAD Pro software.
5. **[Planning and Design of Road Infrastructure Studio:](#)** Designed a flexible pavement road linking Thol bird sanctuary to Kanjari Blackbuck sanctuary.
6. **[Engineering Sustainability Studio:](#)** Conducted a comparative study on material concepts with 1 cubic meter models. Featured in Gujarat Samachar newspaper for innovative outcomes.
7. **[Research: Maintenance and Protection of Traffic at Active Work Zones:](#)** Focused on work zone safety in urban Indian construction. Conducted literature reviews, on-site assessments, and in-depth analysis, leading to a checklist for traffic control and safety parameters.

CONFERENCES ATTENDED

1. "The Spirit of Gravity" by Mr. B L Manjunath
2. "Repair and Protection of Reinforced Concrete Structures" by Er. Sunny Surlaker
3. "Geophysical Investigations for Seismic Microzonation Studies" by Dr. Sumer Chopra

ACADEMIC ACHIEVEMENTS

Achieved 'Best Student of the Studio' award for my performance in the Planning and Design of Road Infrastructure Studio.

EXTRA CURRICULAR PARTICIPATION

1. **Academic Team for Research:** I played pivotal roles in three research projects: 'Strengthening the Unorganized Sector of Construction,' 'Awareness for Acceptance of Green Buildings,' and 'Resilient Roads in the City: An Experiment.'
2. **Engineers Day Event - Core Committee Member:** Served as a core committee member of the 'Structure and Installation' team during the Engineers Day Event.
3. **Cricket Team Captain - University Level Competitions:** Captained the College Cricket Team and participated in university-level competitions.
4. **Blood Donation Camp Participation:** Actively participated in the university blood donation camp organized by Red Cross Society.
5. **Cleanliness Drive and Drama Performance at Raysan Village:** Actively participated in a cleanliness drive and took part in a drama performance at Raysan Village near Gandhinagar city. The primary objective was to create awareness regarding cleanliness among the local community.
6. **'Grow More Trees' Campaign:** Participated in the 'Grow more trees' campaign in Ahmedabad to actively contribute to environmental sustainability by promoting tree plantation.

OTHER MAJOR SUBJECTS

1. **Real Estate and Valuation:** Undertook this elective to comprehend the intricacies of real estate dynamics and valuation processes, providing a comprehensive understanding of the economic aspects associated with construction projects.
 2. **Innovating Financing Opportunities for Tourism-Centric Development of Small Towns:** Participated in this immersive winter school to explore innovative approaches to finance tourism-centric development in Theog near Shimla. The outcomes of this effort were recognized, and my name was featured in Dainik Bhaskar newspaper.
 3. **Port and Harbour Structures:** Engaged in this winter school to delve into the intricate design aspects of marine structures. In which I analysed and designed a marine jetty for various loads and forces along with the understanding of structural engineering in the maritime context.
 4. **Project Estimation:** Spearheaded the comprehensive estimation for a bungalow project, encompassing bar bending schedule, labour, cement, sand, machinery, and utilities, providing a detailed cost breakdown.
 5. **Advanced Construction Techniques:** Explored cutting-edge technologies in mega infrastructure projects, delving into tunnel formwork, precast concrete, and high-rise construction, gaining invaluable exposure to the latest industry advancements.
 6. **Field Studio at Varanasi:** Understood and documented the architectural elements of the ghats, which are a prominent feature of the ancient and historical city of Varanasi along with observing and studying the cultural activities that occur at these historical sites throughout the day, gaining insights into how these activities relate to the psychology of the native people.
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