

SAURABH BULCHANDANI

MALE, 25 YRS

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SUMMARY

Structural engineer with 3 years of experience in real estate industry for working on structural design and BIM of residential, commercial and institutional projects. Proficient in Indian codes of structural design and earthquake resistant design. (IS 456, IS 1893, IS 13920, IS 873, IS 800, SP-34)

EDUCATION

Course	Passing year	Institute	Percentage
B.E. (Hons.) Civil Engineering	2014	B.I.T.S. Pilani, Pilani Campus	7.28/10
AISSCE (Class XII)	2009	Demonstration School, Ajmer	80.4%
AISCE (Class X)	2007	Demonstration School, Ajmer	78.6%

EMPLOYMENT

Engineer - Structures at **Intec Infra Technologies Pvt. Ltd.**, Gurgaon

Nov, 2016 - Present

- Structural analysis & design of precast & cast in-situ concrete structures right from concept design to delivering site construction drawings and shop drawing for structural members.
- Preparation of design basis report, structural models in ETABS, SAFE for structural analysis and member design of RCC structures
- Quality checks of BIM models (TEKLA & Revit) across the structural drawings of consultant for flawless BBS & BOQ generation of ease of procurement and construction.
- Development of custom components in TEKLA for speed up rebar modeling for various concrete members as beam, columns & slabs.
- Preparation of RFI (Request for information) documents for discrepancies & errors in the structural drawings to communicate with the client.

Structural Design Engineer at **Optimum Design Pvt. Ltd.** , Noida

April, 2016 – Oct, 2016

- Complete structural analysis & design of concrete residential & commercial high rise buildings adhering to the Indian codes of concrete & earthquake resistant design (IS 456, IS 875, IS 1893 & IS 13920).
- Design and detailing of structural elements (raft foundations, water tanks, retaining walls, staircases, shear walls, beams, slabs & columns) using STAAD PRO, ETABS & SAFE.
- Coordination with architects and other consultants to achieve effective structural design of the building.
- Managing team of draughtsman to produce Good for construction (GFC) drawings for efficient site execution of the project.

Engineer Structures at **Engineering Design & Research Pvt. Ltd.** , Indirapuram, Ghaziabad

July, 2014 – March, 2016

- Worked on structural analysis & design of concrete residential & commercial buildings of storey up to G + 19.
- Worked on design and detailing of columns, shear walls, slabs and beams using computer aided software for structural design. (STAAD PRO, ETABS, SAFE)
- Done complete analysis and design of minor concrete & steel structures adhering to Indian codes for structural design.

PROJECTS

DLF - 5, EWS at Zone 7 , DLF Phase 5, Gurgaon

- Project consists of one tower of Stilt + 3 Podium + 15 floor of concrete building used for residential purpose.
- Intec Infra was responsible for development structural building information modelling, production BOQ & BBS linked with GFC drawings.
- Was assigned project manager, responsible for client coordination, scrutiny of structural drawings, RFI document coordinations, smooth execution of rebar modelling for concrete structure
- BIM model is developed on TEKLA for concrete and rebar.

Poh Cheong G+18 Precast building, at Myanmar

- Project consists of one G+18 story precast building for residential use located at Myanmar.
- Intec Infra was responsible for concept structural & obtaining viability of precast building and cost.
- Developed the structural models for the structure & did the design adhering to ACSE 07 & ACI 318.
- Also worked on precast connections (wall-wall connection, Beam-slab connection) to provide complete concept study.

M3M Latitude, Gurgaon

- Project comprises of one RCC tower of 4B+G+44 storeys and non tower area around this tower.
- Intec Infra was tasked for developing the BIM model for BBS & BOQ extraction of the concrete and rebar quantities.
- performed quality checks on the TEKLA model, RFI documentation, BOQ preparation for efficient output.
- Managed a team of TEKLA modellers to deliver the projects effectively for ease of construction.

GODREJ group housing project at sector 88A, Gurgaon

- Project comprised of four towers of 2B+G+18 and one tower 2B+G+31 reinforced concrete building.
- EDR Pvt. Ltd. was responsible for complete structural analysis and design.
- Done design and detailing of concrete columns, shear walls, slabs and beams for all the towers.

Lucknow group housing for Lucknow development authority in Kabir Nagar

- Project included five RCC structures of complete shear wall system (one G +19 & four G +12 buildings).
- EDR Pvt. Ltd. was responsible for delivering of complete structural design and good for construction drawings.
- Prepared ETABS model for all the five towers and done design & detailing of shear walls, slabs and raft foundations.

Safdarjung project for Central Public Works Department

- Project consists of three RCC buildings lecture theatre, auditorium and boys hostel.
- Complete structural analysis and design was delivered by EDR Pvt. Ltd.
- Developed structural models in ETABS for lecture theatre and done design & detailing of concrete slabs.

INTERNSHIPS & TRAININGS

Structural Design Trainee at Miyamoto International India, Sector 48, Gurgaon

Jan, 2015-May, 2015

- Attained basic proficiency level on ETAB, SAFE and SAP2000 adhering to Indian codes for design IS 456, IS 875, IS 1893, IS 13920 & IS 800.
- Learned to read and prepare structural design (GFCs, Vetting, approval drawings) of various structural members.
- Worked on the structural design of RCC structures. Assisted in structural analysis of Sikka Karnam Greens, D. N Homes (Service apartment).

Intern at Central Building Research Institute, Roorkee

July 2013-Dec,2013

- Analyzed the fatigue life prediction abilities of Abaqus/Standard and fatigue life tool of Ansys workbench
- Developed an experimental & analytical approach for fatigue life assessment of steel structures of NTPC Rihand Nagar
- Conducted experiments to obtain stress life (S-N) curve for standard fatigue testing specimen for axial loading

- Worked as vocational trainee in mechanical unit of Rajasthan Atomic Power Station-3,4(RAPS-3,4)
- Performed experiments of hydraulics on 'Hydraulic Trainer' & prepared animation of those experiments in Adobe Flash
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Electives Completed: Introduction to Finite Element Method, Design of Bridge Structures, Introduction to Geographical Information System, Analysis of Structures and Green Buildings & Energy Conservation.

ACADEMIC PROJECTS

Finite element bending analysis of composite shell using degenerated shell element (Thesis project)

- Formulated stiffness matrix for an orthotropic cylindrical shell using 16-noded degenerated shell elements
- Prepared a methodology in MATLAB for bending analysis of cylindrical shells using shell elements

Convergence analysis for in-plane bending problem of a plate (Project for completion of course, Finite element method, 2013)

- Modeled a given plate structure in ABAQUS and analyzed it using CST, LST, 8-noded & 4-noded quadrilateral elements
- Performed the convergence analysis for every element using different seed sizes

Strengthening by near surface mounted fiber reinforced polymer of old masonry concrete structures (Lab oriented project)

- Fabrication of fiber reinforced bars using copper, glass, carbon and nylon fibers in different proportions
- Manufacturing engineered cementitious composite (ECC) sheets for reinforcement of brick masonry beams
- Flexural strength testing of standard and reinforced brick beams and comparison for their strength

Electricity Distribution using GIS (Project for completion of course, Introduction to GIS, 2012)

- Electricity distribution in capitals of Indian states with minimum distance between distributor and consumer
- Prepared algorithm and used in ArcMap-ArcInfo

Optimization of pipe network using minimum spanning tree algorithm (APOGEE -Technical Festival)

- Used Kruskal's algorithm to solve the optimization problem for connecting pipes in a community rainwater harvesting
- Coded the same algorithm using MATLAB and computed the minimum pipe length required for natural flow.

ACADEMIC ACHIEVEMENTS AND AWARDS

- Cleared UNCSD Rio+20 India certification program with an A grade
- Got AIR-6719 in IIT-JEE 2009
- Got AIR-7334 in IIT-JEE 2010

POSITIONS OF RESPONSIBILITY

Core team Member, Aakash Ganga Project

Sep,2011- May, 2013

- Aakash Ganga is rainwater harvesting project aimed at eliminating the perennial scarcity of water in rural areas
- Associated with various technical problems of the rainwater harvesting involving water storage and filtration process
- Prepared algorithm for network optimization of connecting pipes of community rainwater harvesting scheme & coded it in MATLAB

SOFTWARE SKILLS

- AutoCAD, STAAD Pro, ETABS, SAFE, TEKLA 20.0, Autodesk Revit 2017, SAP2000 , ABAQUS, ANSYS (mechanical/workbench), MATLAB, ECOTECT, ArcGIS/ ArcMAP, C++, Adobe Photoshop, MS Office Suite, R , SAS, SQL PL/SQL.

EXTRA-CURRICULAR ACTIVITIES AND ACHIEVEMENTS

- Cleared A-certificate of National Cadet Corp (NCC) in 2006 & attended the NCC camp of 10 days
- Worked on an idea "Samagra Krishi Nidan" aimed at providing comprehensive solutions to farmers and pitched it into Rockefeller Innovation Challenge 2012