# Abhilash Sanjay Ghumadwar

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## PROFESSIONAL EXPERIENCE

- **Mumbai Railway Vikas Corporation Ltd.,** *(A PSU of Govt. of India, Ministry of Railways)*      *(15,Sept,2020–Present)*
  - **Senior Project Engineer**      *(22,Dec,2022–Present)*
    - Preparation of Girder Launching Drawings for FOBs and skywalks.
    - Checking Designs of Station Improvement Work of Mumbai Suburban Railway.
    - Submitting the Design Drawings for proofchecking to IIT & Getting it approved.
    - Execution, Planning & Billing of Station Improvement Work at Neral Station consisting of Buildings, Overhead Water Tank, Underground Water Tanks, Foot over bridge, Deck, Platform covering etc.,
    - De-launching execution of FOB (N-Type Truss) at Kasara Station.
  - **Project Engineer**      *(15,Sept,2020–21,Dec,2022)*
    - Site visits, Planning, Approval of Station Improvement Works of Mumbai Suburban Railway.
    - Preparing Design Basis Report.
    - Designing Foot Over Bridges, Buildings (RCC Slab & Truss Roof), Retaining walls, UGTs , Workshop etc.,
    - Involved in evaluation of Detailed Design Consultancy Proposals for Station Improvement Work.
    - Preparing quotations and evaluation of for boarding Proofchecking agency (IITB).
    - Checking Designs of Station Improvement Works of Mumbai Suburban Railway.
    - Preparing Quotations and Executing Geotechnical Survey.
    - Preparing Quantity Estimation and Bill of Quantities (BOQs) for Station Improvement Work Tender.
    - Involved in preparation of Works Tender Document using e-Procurement Portal and Evaluation for Station Improvement Work
    - Execution, Planning & Billing of Station Improvement work at Neral Station of Central Railway.
- **Indian Institute of Technology, Kanpur**      *(August,2018–April,2020)*
  - **Teaching Assistant**
    - Reinforced Concrete Design      *(Spring,2019)*
    - Structural Dynamics      *(Autumn,2019)*
    - Experimental Methods in Structural Engineering      *(Spring,2020)*
    - Stability                                          of                                          Structures      *(Spring,2020)*

## ACADEMIC QUALIFICATIONS

| Degree | Institution | Year | CPI/Percentage |
|---|---|---|---|
| M.Tech(Structural Engineering) | IIT Kanpur, Kanpur | 2022 | 9.64/10 |
| B.Tech(Civil Engineering) | Govt. College of Engg., Amravati | 2018 | 7.89/10 |
| XII(MSBHSE) | Shivaji Science College, Nagpur | 2014 | 83.85 % |
| X(MSBSE) | Somalwar High School, Nagpur | 2012 | 90.73 % |

## SCHOLASTIC  ACHIEVEMENTS

- Secured **99.65 percentile** in GATE 2018 among 1.5 lakh aspirants (**AIR 529**).
- **Academic Excellence Award** at IIT Kanpur (March-2020).

## RELLEVANT COURSES

- Structural Dynamics | Random Vibrations| Engg. Mechanics| Finite Element Methods |
  | Structural Health Monitoring | Earthquake Analysis and Design of Structures | Stability of Structures |
  |Strength of Materials| Structural Analysis| Design of Steel & RCC Structures | Geotechnical Engg. |

## ACADEMIC PROJECTS

- **On Use of Peak Factors in Response Spectrum Based Modal Combination Rules for Seismic Response.**
  (M.Tech Thesis)   **[Dr.Vinay Kumar Gupta]**                                                          (*Dec,2022)*
    - Generating Wavelet based time histories for a desired Target Spectrum.
    - Modelling Non-Stationarity Peak Factor to determine Peak Floor Response of structure during Earthquake.
- **Designing of Lateral Force Resisting System using
  Steel Special Moment Resisting Frame (SMRF)** (Group Project)                         (*April,2019*)
  **Earthquake Analysis and Design of Structures (CE 629)**
    - Modeled Five Story Office Building using member available in European and Indian Standard.
    - Analyzed structure using SAP 2000, Designed using IS: 800-2007, IS: 1893(Part 1)-2016 and FEMA 350 -2000.
- **Probabilistic Seismic Hazard Analysis (**Term Paper)
  **Earthquake Analysis and Design of Structures (CE 629A)**                              (*April,2019*.
- **Natural Excitation Technique-ERA** (Term Project)                                          (*April,2019*)
  **Vibration based Structural Health Monitoring for CE Application (CE 725A)**
    - Determined first natural frequencies and mode shapes of structure using Output Only Method in both longitudinal and lateral directions.
- **Response spectrum analysis for floor acceleration** (Term Paper)
  **Random Vibrations (CE 721A)**                                                                 (*April,2019*)
- **Experimental Study of Reinforced Concrete Beam Model** (Team Project)                (*April,2019*)
  **Experimental Methods in Structural Engineering (CE 623A)**
    - Designed Prototype Beam for a given problem statement & modelled it using Similitude Laws.
    - Tested Model Beam to validate result against Theoretical Ultimate Load.
- **B.Tech Project**                                                                            (*April,2018*)
    - Experimental Investigation of Geo-Polymer Concrete Pavement Blocks
    - Studied chemical reaction taking place in Geo-Polymer concrete.
    - Determined proportion of material quantity desired for Pavement Block's target strength and cost of product.

## INTERNSHIP EXPERIENCE

- **Balaji Structural Consultancy** *(Rajapeth, Amravati, Maharashtra)*               *(25,Nov,2016–25,Jan,2017)*
    - Developed reinforced concrete steel design worksheets on Excel.
    - Assisted in analysis and structural designing using STADD Pro. in projects including residential, commercial building.
    - Inspection of construction progress of hotel site as a Site Engineer.

## TECHNICAL SKILLS

- **Engineering Software:**  MATLAB, AUTOCAD, ETABS, SAP 2000, STAAD PRO, PRIMAVERA.
- **Other Software:**  MS-WORD, POWER-POINT, EXCEL**,** LATEX.