

RANVIJAY SINGH

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EDUCATION

Drexel University, Philadelphia, PA

Pursuing MS in Civil Engineering, Major- Structural Engineering

Relevant Coursework- Advance Mechanics of Materials, Fundamentals of Structural Dyn, Structural Analysis I, II and III, Advanced Concrete Technology, Risk Assessment

Sept 2021 - Dec 2022

GPA- 3.73 (on scale of 4)

Gautam Buddha University, Greater Noida, India

Integrated Bachelor's + Master's of Technology in Civil Engineering

Relevant coursework: Building planning and construction, Transportation Engineering, Structure Analysis, Design of Steel Structure, Bridge Engineering

July 2011 - May 2016

CGPA- 7.8 (on scale of 10)

TECHNICAL SKILLS

Simulation software- AUTOCAD, STAAD.Pro, Revit, SAP2000, ABAQUS, MATLAB, LATEX, RAM, SPSS

Microsoft Office- Word, PowerPoint, Excel, Project 2016.

Operating system- Windows, Ubuntu, macOS

PROFESSIONAL EXPERIENCE

Design Engineer, Girraj Constructions Pvt. Ltd., Agra, India

- Monitored execution of contract work for compliance with design plans and specifications.
- Collaborated with civil technicians to gather project equipment and update maps, drawings and blueprints.
- Managed construction contracts for capital projects to outline objectives, stakeholder responsibilities and modification procedures.
- Provided technical and professional engineering support services in design, construction and traffic engineering.

Feb 2021 - August 2021

Assistant professor in Anand International College of Engineering, Jaipur, India

Subjects/Labs Taught: Surveying, Building Material and Construction, Design of Steel Structure

- Delivered basic knowledge of civil engineering to students, manage the section of 140 students.
- Delivering lectures, assignments, providing notes and grading their works are some of the basic responsibilities of the work.
- Also, helped undergraduate students with their assignments and projects.

March 2017 - Feb 2021

Intern, Indian Railway, India

- A full case study of the Railway work site was carried out.
- Under this traffic growth, tariff increase, labor productivity, revenue density of freight trains, revenue density of passenger trains, wagon utilization all were part of study and work.
- The findings of study suggests that the overall degree of private sector participation in India's rail sector is currently low by international standards, and it will be interesting to monitor the success of the newly minted PPPs as they mature.

June 2015 - July 2015

Trainee, Indian Railway, India

- Worked on site for Launching and de-launching of the girder and construction of RoB (Road over bridge).
- Calculated the bending moment on the end support and the center of the girder.
- Study of the building material and the calculation of different moments and loads acting on the girder.

June 2014 - July 2014

ACADEMIC PROJECTS

Submitted Dissertation on “Deflection Estimation for Structural Health Monitoring using Computer Vision Algorithm” Drexel University, Philadelphia, PA

June 2022 - Dec 2022

- The study was done to find the cheaper and more accurate technique to measure deformation in beams.
- Developed the MATLAB algorithm to read the deflection also, design the STAAD. Pro and ABAQUS model in the experimental study.
- Results proposed Image photogrammetry can analyse the deflection with accuracy in real time.

Submitted Dissertation on “Effect of Rail Structure Interaction on Dispersion of Longitudinal Forces in Bridges with Continuous Welded Rails” Gautam Buddha University, Greater Noida, India

June 2015 - May 2016

- The study was done to observe changes in the structural behaviour due to incorporation of RSI.
- Two bridges of 6x18.3 m composite girder and 4x12.2 m PSC Girder Bridge were analysed.
- Under results, Vertical deflection in girder, Maximum bending moment, Rail forces, Girder forces and Rail force dispersion length were analysed.
- Developed a STAAD.pro model of bridge.

Case study of Yamuna Expressway

August 2014 - May 2015

- Studied Project details, material used, key milestone, comparison with another corridor.
- Analyzed Yamuna Expressway toll rates, Interchange, Types of Interchange.
- It is India's first expressway, on which successful trial of landing and taking-off of aircraft has been conducted.

PUBLICATIONS

Ranvijay Singh, Shivani Verma and Dr. R. K. Shukla, “Multipoint Deflection Analysis Using Non-Contact Image Based System” CRC press Taylor and Francis, ICT for Competitive Strategies (2019), pp 801-806

November 2019

Ranvijay Singh, R. K. Shukla (2019), “Load Variation Impact in Beam Using Image Photography”, International Conference on Energy, Environment & Material Sciences (ICE2M) (2019).

December 2019

CERTIFICATIONS

Attended Workshop on “Seismic Design of Buildings”, using SAP software by “Civil Simplified”.

March 2014

Attended Workshop on “Concrete Mix Design and Self Compacting Concrete”, organized by “Ambuja Cement”.

April 2014

Attended Workshop on “Research Areas in Structural Engineering” organized by “Gautam Buddha University”.

September 2015

Completed certification course on “MATLAB” conducted by E & ICT, Ministry of Electronics & Information Technology, Government of India

April 2019

Completed certification course on “AutoCAD” conducted by Autodesk

September 2019

Completed certification course on “STAAD.PRO” conducted by E & ICT, Ministry of Electronics & Information Technology, Government of India

November 2019

Attended “Short-Term Course on Research Methods and Data Analysis Using SPSS & AMOS” organized by “Madan Mohan Malaviya University of Technology.”

January 2020

WORKSHOPS/SEMINARS CONDUCTED

Organizing Committee Member in International Conference organized by IEEE, “UPCON-2018”

November 2018

Volunteer in one week Short-Course on “Performance Evaluation for Improved design and Engineering of Buildings”

September 2019

Student Coordinator in one week Short-Course on “Performance Evaluation for Improved design and Engineering of Buildings

September 2019

Jury Member of “Internal Hackathon for Smart India Hackathon,2020” organized by IEEE

February 2020