

ADITYA KAMATH (EIT)

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EDUCATION

Clemson University

Master of Science in Civil Engineering Specialization in Structural Engineering

Relevant Courses – Advanced Reinforced Concrete, Bridge Design, Pre-stressed Concrete, Dynamic Analysis of Structures
Structural Loads & Systems

Clemson, SC
August 2015 – Present
GPA: 3.5/4.00

Rizvi College of Engineering

Bachelor of Engineering in Civil Engineering

Relevant Courses - Structural Analysis, Steel Design, Strength of Materials, Concrete technology

August 2011 – July 2015
Mumbai, India

Work Experience

Black & Veatch

Structural Engineer Intern,

Summer 2016

- Worked as structural engineer intern on LNG project (Oil & Gas Division) in Black & Veatch
- Performed analysis and steel design of high utility structures like pipe racks using STAAD.Pro
- Worked along with lead design engineer to carry out dynamic analysis and foundation design of high pressure LNG pumps using SAP2000
- Exposure to EPC company organization structure and procedures, project schedule, interdisciplinary information transfer and communication, important technical deliverables, drawings and calculation reports
- Studied analysis and RCC design of main control building, laboratory building & flare stack foundation along with Senior Structural Engineer using STAAD.Pro
- Underwent Project Design Software (PDS) training and exposure to software like RISA 3D & Navisworks
- Manually designed one way & two way slab of fire station building according to client specifications and crossed check reinforcement details with actual calculations
- Developed wind spread sheet on Microsoft Excel to calculate wind pressure on walls and roof of any given building with a pitched roof.
- Studied design and construction process of storage tank containing LNG at cryogenic temperature of -162 degree Celsius
- Prepared PGN (Quality) reports, maintained folder of revised structural drawings and attended client review meetings
- Prepared a comprehensive internship report & presented overall work to the Director of Engineering, Sections Heads and Project Managers

Graduate Research Assistant

Clemson University

August 2016 – Present
Clemson, SC

- Working on project funded by NCPTT to perform non-linear dynamic analysis of masonry arch bridges using ANSYS and to generate infrastructure risk indices to help enable stewardship of nations masonry arch bridges to make retrofitting decisions of the heritage structure
- To catalog masonry arch bridges using National Bridge Inventory (NBI) along with their structural & geometric features to identify distinguishing parameters
- Develop high-fidelity parametric finite element model of masonry arch bridge using ANSYS and perform non-linear dynamic analysis for seismic, wind and flood scenarios
- Perform sensitivity analysis to determine the most influential parameters in the model
- Prepare vulnerability functions between highly influential parameters and hazard parameters to generate infrastructure risk index as annual probability of failure for given hazard type.
- Study the effect of retrofitting solution on the bridge and estimate cost of each proposed retrofitting scheme

PROJECTS

Design of Pre-stressed Bridge Girder, Deck & Diaphragm of I-81 over Abrams Creek, VA

January 2016 - Present

Clemson University

Clemson, SC

- Developed Shear & moment envelopes due to HL-93 truck on SAP2000 and carried out load calculation for Strength-1, Service-1 and Service-3 load combinations
- Performed preliminary allowable stress design of pre-stressed girder at Transfer & Service Stage and calculated loss of pre-stress according to AASHTO Bridge Design Specification
- Carried out Strength and Shear design of pre-stressed girder and performed camber and deflection checks at erection & full loading
- Conducted design of bridge deck reinforcement for positive and negative moments
- Performed design of continuity diaphragm for typical three girder system including negative moment at interior support

Modal Analysis of Clemson Memorial Football Stadium using SAP2000

August 2015 – December 2015

Clemson University

Clemson, SC

- Modeled Clemson Memorial Football Stadium using AutoCAD
- Imported model on SAP2000 and performed Modal analysis on the structure with Stadium empty and full case and compared software results with on-site results
- Replicated the jumping action of the crowd in the stadium in the form of springs and analyzed the structure to obtain mode shapes & natural frequency due to the damping effects
- Obtained analysis results with difference between software and on-site results being less than 10%
- Learnt concept of resonance and ways to optimize the damping of system

Comparative Analysis & Design of G+30 Residential Structure using ETABS and MidasGen

August 2014 – March 2015

Rizvi College of Engineering

Mumbai, India

- Modeled G+30 residential building using AutoCAD
- Imported AutoCAD model on ETABS and MidasGen and performed wind and seismic analysis using IS-875 Part 3 & IS-1893 Part 1 respectively
- Obtained similar analysis results on two software in terms of modes shapes, natural frequency, base shear, bending moment and shear forces on individual members of the structures, with difference in the results being less than 5 %
- Compared the software results to find difference between the two software in terms its wide range of available tools and different parameters
- Conducted design of the columns, beams and slabs using IS-456 for worst possible load combination
- Designed reinforcement and prepared bar bending schedule for reinforcement details of all the members
- Awarded as the best undergrad project in civil engineering department

CERTIFICATIONS

EIT Certification, AutoCAD Certification

TECHNICAL SKILLS

AutoCad, STAAD.Pro, ETABS, MidasGen, SAP2000, MATLAB, Microsoft Office, ANSYS, MathCad, RISA 3D

Extracurricular Activities

Food Service Employee

November 2015 – Present

Aramark

Clemson, SC

- Worked as food service employee for Aramark in food outlets like Subway, Panda Express & Tiger Grill
- Provide best customer service experience by promptly greeting customers and accurately packaging food orders
- Trained 3 new employees for back house cooking, hygiene and serving etiquettes
- Developed culinary & public speaking skills through regular conversation with colleagues and customers
- Conducted quality & temperature check on food and promptly updated the manager in case of any deviations

Student Patrol Officer

August 2015- November 2015

Clemson University (Police Department)

Clemson, SC

- Ensured the safety of students faculty and staff in academic buildings and residence facilities
- Timely updated monitor room about any suspicious activities around campus
- Managed time scheduling of other Student Patrol Officers

VOLUNTEER EXPERIENCE

Clemson Life

August 2015 – Present

Lunch Buddy

Clemson, SC

- Served as a “Lunch Buddy” for special needs students
- Accompanied students to dining hall and assisted them with any help they required
- Help students with their day-to-day social as well as academic problems

Aakanksha Foundation

August 2012 – March 2015

Assistant Teacher

Mumbai, India

- Certified Volunteer at Non-Governmental Organization named “Aakanksha Foundation”
- Taught approximately 120 under privileged children Math and Science
- Assisted staff to plan course work for children