

Umadhara Reddy Chemicala

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SUMMARY

Aspiring structural engineer, eager to apply foundational knowledge in structural analysis and design. Proficient in software tools for drafting and modeling such as AutoCAD, Revit, RISA and ETABS. Skilled in design and analysis with a focus on safety and sustainability.

EDUCATION

- **Master of Science, Civil Engineering** August 2022 – May 2024
Arizona State University, Tempe, AZ
Relevant Coursework: Prestressed Concrete, Properties of Concrete, Advanced Soil Mechanics, Developing Software for Engineering Applications, Advanced Concrete Structures, Advanced Foundations, Advanced Mechanics of Materials, Machine learning using python.
- **Bachelor of Technology, Civil Engineering** June 2018 – May 2022
Vellore Institute of Technology, Vellore, India
Relevant Coursework: Engineering Mechanics, Strength of Materials, Structural Analysis, Basics of Structural Design, Fluid Mechanics, Construction Planning and Management, Building Drawing, Surveying, Transportation engineering.

TECHNICAL SKILLS

Design and Modeling Tools: AutoCAD, Revit Structure, ETABS, Civil 3D, CSI-SAFE, GS-USA frame, SOLIDWORKS, RISA.

Programming: Python, C++, MATLAB.

Tools: Microsoft Excel, Word, PowerPoint, Microsoft Project, Google (docs and sheets), Outlook.

PROFESSIONAL EXPERIENCE

- Sri Venkateswara Enterprises | Civil Engineer Intern - Andhra Pradesh, India** May 2019 – July 2020
- Contributed to residential buildings and bridge construction, playing a crucial role in various construction phases.
 - Aided in construction foundation through significant involvement in site surveying, excavation, and foundation preparation.
 - Improved bridge integrity by creating precise engineering design calculations and layouts for Piers, Deck, and Girders.
 - Worked closely with senior engineers, utilizing tools like AutoCAD, Revit, and RISA for efficient bridge design.
 - Collaborated with the team to assemble crucial bridge components, ensuring a smooth and timely construction process.
 - Actively participated in progress meetings, offering valuable insights and documenting meeting minutes for effective communication.
 - Conducted on-site visits and inspections to assess construction progress, ensuring adherence to quality standards and contributing to the project's success.

ACADEMIC PROJECTS

- Finite Element modelling of Steel safety box** Aug 2022 – Dec 2022
- Modeled a rectangular steel safety box, adhering to AIS-360 standards, with soil pressure exerted on the longer sides, perpendicular to the surface.
 - Utilized a Model Builder program in C++ to generate an input file, facilitating the analysis of the steel box in GS-USA Frame3D.
 - Executed a comprehensive analysis of the steel box, yielding critical data on maximum and minimum Von Mises Stress and displacement.

- Design, Analysis and Modelling of a school building using ETABS and CSI-SAFE** Jan 2022 - May 2022
- Designed a school building which can be built on severe earthquake prone zone (Using AutoCAD, Revit) and generated 3D model.
 - Conducted static and dynamic analyses with ETABS, and thoroughly assessed footings via CSI-SAFE.
 - Produced comprehensive detailing for beams, columns, slabs, and footings, ensuring structural integrity and safety.

- Design of Wastewater treatment facility for a Leather Industry** Jan 2021 – May 2021
- This project is aimed to significantly reduce pollution levels in the water discharged as a byproduct of leather production.
 - Designed a primary and secondary wastewater treatment facility for the leather industry.
 - Utilized AutoCAD to create designs for both primary and secondary wastewater treatment facilities for the leather industry.

CERTIFICATIONS

- Engineering Project Management: Scope, Time, and Cost Management – **RICE University** May 2021
- Revit Structure - **Udemy** March 2021
- ETABS and SAFE complete building design with detailing - **Udemy** July 2022
- Introduction to Household Water Treatment and Safe Storage – **Swiss federal institute of technology** May 2021
- Disaster Preparedness – **University of Pittsburgh** June 2020