

# GIRI SUBBU RATHINAM ARUN KUMAR

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## **EDUCATION**

**University of Illinois at Urbana-Champaign**

*Master of Science in Civil Engineering (Structural Engineering)*

Expected: December 2022

GPA: 2.83/4

## **Academic Courses**

Steel Structures 1, Steel Structures 2, Reinforced Concrete 1, Reinforced Concrete 2, Finite Element Methods, Theory and Creation of Structures, Wind Effects on Structures, Probabilistic Loads and Design, Earthquake Engineering, Structural Mechanics, Structural Dynamics, Structural Analysis

**Vellore Institute of Technology (VIT), Chennai**

*Bachelor of Technology in Civil Engineering*

June 2021

GPA: 9.19/10

## **TECHNICAL SKILLS**

*Design and Analysis:* Abaqus, GiD, RISA-3D, STAAD.Pro V8i

*Modeling:* Revit, Navisworks

*Drafting:* AutoCAD 2018, Microstation V8i

*Programming and computation:* MATLAB

*Documentation and Collaboration:* Microsoft 365 (Outlook, Word, PowerPoint, Excel), ProjectWise

## **PROFESSIONAL EXPERIENCES**

**Minnesota Department of Transportation**, Student Worker Paraprofessional Senior

June 2022 – August 2022

- Created Title sheet and Removal plan sheet for SP 2748-68 TH252 using Microstation V8i
- Microstation V8i CADD drafting for making review corrections on SP 1906-71 TH52
- Underwent training to learn the Geometric Design Series and Microstation V8i

**Karthikeyan Associates**, Civil Engineering Intern

May 2021 – June 2021

- Performed on-site investigations for concrete slab design at 4 different residential projects and notified corrections to site engineer
- Explored topics to justify values in tables and guidelines in IS 456:2000 (Indian Concrete Design Code)

**FTC Solar**, Structural Engineering Intern

April 2021 – May 2021

- Modelled, analyzed and designed FTC's solar tracker using RISA-3D 19.0 software and Microsoft Excel
- Collaborated with fellow intern and presented daily reports on project status to manager

## **PROJECTS**

**Study of stress concentration in a finite strip with a circular hole**

April 2022 – May 2022

- Performed finite element analysis of a thin finite strip with a circular hole at the center using Abaqus
- Reduced computation time by analyzing only a quarter of the strip, taking advantage of symmetry of model
- Determined the effect of ratio of hole radius to strip width length on the value of the stress concentration factor
- Ensured project accuracy by comparing results from Abaqus with Girkmann's solution and Roark's formula

**Hot Rolled Steel and Cold Formed Steel Sections Study for a Residential Building** December 2020 – April 2021

- Planned and modelled a G+1 residential building in AutoCAD and STAAD.Pro according to Indian standards
- Performed analysis of the models for dead, live and earthquake loads and concluded results with the estimated cost of construction and material

## **EXTRACURRICULAR ACTIVITIES & LEADERSHIP**

**Chi Epsilon**, Member

February 2022 – Present

**Chi Epsilon**, Graduate Advisor

May 2022 – Present

**Structural Engineering Institute (SEI) - ASCE**, Student member

December 2021 – Present