MANAM VENKATA SAINATH REDDY | 21CE65R14

STRUCTURAL ENGINEERING

EDUCATION

Year	Degree/Exam	Institute	CGPA/Marks
2023	M.TECH	IIT Kharagpur	8.43 / 10
2021	B.TECH	Jawaharlal Nehru Technological University, Hyderabad	8.14 / 10
2017	Higher Secondary	SRM Junior College (TSBIE)	96.0%
2015	Secondary School Certificate	Mother Teresa High School (BSETS)	9.2 / 10

SKILLS AND EXPERTISE

Languages: C, C++, Python, MATLAB, SQL.
Concepts: OOPS, DBMS, Computer Networks, Data structures and algorithms.
Version Control System: Git.
Presenting tools: Excel, PowerPoint, Word.
Soft Skills: Problem-solving, Time management, Critical thinking.
Softwares: STAAD PRO, ABAQUS, AUTO CAD.

CERTIFICATIONS

Certified in Machine Learning Program using MATLAB
•Certified by Coursera and came across concepts like Regression, Classification, Overfitting, and Gradient descent.
•This course also helped me to understand how Machine Learning solves practical life problems.

2022 PYTHON for MACHINE LEARNING and DATA SCIENCE
•Certified by Udemy and came across how to use ML and Data science algorithms using Python.
•Learnt about some inbuilt Libraries like NumPy, Pandas, Matplotlib and SKlearn.
•This course also explains how to handle data in Python.

PROJECTS

Predicting House Prices with Regression using TensorFlow
•Created, trained and evaluated a neural network model.
•After the training, predicting house prices with a high degree of accuracy.
Approach : Data normalization -> Train and Test split ->Create a Neural network -> Model -> Train the model to fit the dataset ->Evaluate the model -> Visualize the predictions -> end

Unsupervised Machine Learning for Customer Market Segmentation
•Market segmentation is crucial for marketers.
•Since it enables them to launch targeted ads.
Approach: Problem statement -> Datasets -> Visualize and explore -> k-means clustering -> Optimal number of clusters -> k-means -> Customer segmentation ->Principal Component Analysis -> Dimensionality reduction and data visualization -> end

Reinforced soil wall design using Geotextiles
Courses: Geotechnical Engineering, Fluid Mechanics, Strength of Materials, Stability Analysis**.**
•To increase soil capacity fibre reinforcement is provided.
•Design process varies with the type of reinforcement introduced.
•We increase the capacity of the Retaining wall.
Approach : Properties of Soil -> Surcharge acting on it -> Type of reinforcement to be introduced -> Optimal use of Geosynthetic Reinforcement -> Find stability criteria -> { if meets -> continue , else -> repeat design till you get stability } -> end

COURSEWORK INFORMATION

Analysis of the Beam-Plate Interaction in 3D frames using MATLAB.
Courses: Finite Element Analysis, Theory of Elasticity, Material properties, Calculus, Algebra.
•Find Beam and Plate interaction using finite element analysis with an approximation of plate nodes over the Beam element.
•How Plate transfer load over Beam using Numerical method.
•This will help or reduce the computational cost of the analysis.
Approach: 3D frame Analysis -> Bending of Plate analysis -> Beam Plate interaction -> 3D frame analysis due to plate interaction with beams -> end

COMPETITION/CONFERENCE

GATE CE 2021
•Secured a rank of 564, with a 99.5 percentile.

POSITIONS OF RESPONSIBILITY

TEACHING ASSISTANT
•Guided over 20 students on coursework.

EXTRA CURRICULAR ACTIVITIES

Hobbies:
•Playing Badminton and Cricket
•Watching Movies and Web series.