ATUL KUMAR GAUTAM

📞 **+91 9580063910**
🔗 **https://github.com/Gatulk**
@ **atulatg123@gmail.com**
📍 **Chennai, INDIA**

SUMMARY

To secure a responsible career opportunity and fully utilize my skills and training while making all possible efforts to achieve the best results. I want to be a valuable resource for my organization.

EDUCATION

M. Tech

Indian Institute of Technology Kanpur

📅 09/2020 - 08/2022

PROJECTS

Correcting the drift and spatial distortion in SEM images for effective Digital Image Correlation

Indian Institute of Technology Kanpur

📅 05/2021 - 08/2022   📍 Kanpur, Uttar Pradesh, India

Master's thesis project

- Created a user-friendly GUI for correcting the Drift Distortion of scanning electron microscope(SEM) images to get better Digital Image Correlation(DIC) using MATLAB.
- Evaluation of change in drift for each pixel location by performing DIC on consecutive images in pair using NCORR.
- Applied for determination of mechanical properties using Miniature tensile test in the scanning electron microscope.

The Finite Inflation of an Elastic Toroidal Membrane of Circular Cross-section

Indian Institute of Technology Kanpur

📅 01/2021 - 02/2021   📍 Kanpur, Uttar Pradesh, India

Course Project

- The main objective of this project is to obtain an approximate solution for a toroidal membrane of a circular cross-section inflated by uniform internal pressure.
- This toroidal membrane is composed of homogeneous incompressible elastic material. We have used general equation for an Axially Symmetric deformation to get the results.

Generative Adversarial Network(GAN) for generating new images

Self Initiated Project

📅 09/2022   📍 Chennai, India

Self Project

- Developed a generative adversarial network with deep convolution networks for generating small photographs of objects from the CIFAR small object photograph dataset.
- Defined and trained the discriminating model for learning the difference between real and fake images.
- Defined a generator model and trained the composite generator and discriminator model.
- Evaluated the performance of the GAN and use the final generator model to generate new images.

SKILLS

Python MySQL C/C++ Matlab

LaTeX MS Excel SEM DIC

LANGUAGES

English   Professional Efficiency

KEY COURSES

📘 **Academic Courses**

- Introduction to Solid Mechanics
- Introduction to continuum mechanics
- Applied Dynamics and vibration
- Finite Element Method
- Design for Manufacturing & assembly
- Vibration Control

📘 **Other Courses:**

- Python for Data Science & ML
- SQL **:** MySQL for Data Analytics and BI
- Statistics for Data Science and Business Analysis
- Microsoft Excel : Beginner to Advance
- Data Structure and Algorithm
- Supervised Machine Learning
- Advanced Learning Algorithms
- Unsupervised Learning
- Reinforcement Learning

ACHIEVEMENT AND POR

Achievement

GATE 2020(ME),Cleared with 95.67 percentile among 1.37 lakhs of students

POR

Teaching Assistant : Introduction of solid mechanics(ME621A) at IIT Kanpur

EXTRACURRICULAR

Internship

Practical understanding of different types of Heat treatment processes conducted by R. D. Forge.