

# Mathan Prasanna Kumar

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## Education

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**Government College of Engineering, Salem, Tamil Nadu.**

Graduation : 2022

**Bachelor of Engineering in Civil Engineering**

CGPA : 8.40/10

## Skills

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**Languages:** C++, Python, JavaScript, HTML, CSS

**Technologies:** Tensorflow, Keras, Opencv, Langchain, Nodejs, Express.js, Flask, Git, PostgreSQL

## Projects

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### SRGAN

([github.com/srgan](https://github.com/srgan))

- A generator model implemented in TensorFlow that super resolve the low-resolution image.
- SRRESNET is initially trained with MSE optimization and then GAN training is done with perceptual loss optimization and Upscaling of the feature maps is done by Subpixel blocks.
- COCO dataset is used for training and Generator is trained for 1million steps in the SRRESNET training and 200k steps during GAN training
- Eventually, Generator produced amazing results with 0.61 SSIM and 23.877 PSNR on the test dataset.

### Face Recognition System

([github.com/facewebapp](https://github.com/facewebapp))

- Similar to attendance recognition system, users can punch in and out their attendance by verifying their face.
- User data is not stored inside the database ,only the embedding of the user image is stored which is more secure and the user data can never be mishandled.
- Using FaceNet model embedding of the image to be recognized is generated and verified against the reference image embedding.
- Similarity of both input embedding and reference image embedding is measured using cosine similarity distance

### MNIST Handwritten Recognition

([github.com/mnist](https://github.com/mnist))

- Implemented a CNN model which will recognize the handwritten digits with an accuracy of 99.67%
- Sequential model structure is followed for the layers architecture and Batch normalization is applied after each layer.
- For Evaluation K fold cross validation used and followed by the Categorical cross entropy loss.

### Activities

- Solved 500+ problems in Geeks For Geeks. ([gfg/mathan](https://github.com/gfg/mathan))
- Built a Portfolio Website using HTML and CSS.
- Built a Face detector using VGG16 combined with custom model. ([github.com/detector](https://github.com/detector))
- Built a top 50 IMDB movies scraper using python.

## Experience

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### SSV Constructions

**Dec-2022**

- Worked on the execution of Post tensioned cables and supervised labors to implement the laying ,stressing and grouting. Successfully executed laying and tensioning of the cables without bursting.
- Planning of labor and materials is handled without imposing any delay to the project.

### Maruthi Builders (intern)

**Jan-2022**

- Field assessment and Quality checking was done material, execution of work and implemented good practices as per the plan and design.
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