

Education

Kalyani Government Engineering College

Bachelor of Technology in Electronics and Communication

Aug. 2017 – Aug. 2021

CGPA: 8.30/10.00

Experience

Tata Consultancy Services

Aug. 2021 – Present

Assistant System Engineer (Quality Engineer)

Kolkata, West Bengal

- Working with SAP ECC tools along with selenium and Fitnesse automation frameworks, for manual as well as automation testing of pre-existing e-commerce applications and retail services.
- Developed and Incorporated more than 100 new scripts using Fitnesse framework and Jenkins as per business requirements to simulate various end-to-end retail processes to perform daily business activities smoothly.
- Developed new optimized modules and action classes in Java and Selenium to facilitate new test cases for test automation and increased testing efficiency by 20%.
- Responsible for planning and executing important test suites and test packs to improve the business process and performance of the retail services and e-commerce applications workflows.

Academic Projects (incl. Preprints)

Video Classification using Single Frame CNN

[code]

- Developed and trained a video classifier using Single Frame CNN technique, to classify videos against a set of categories or classes.
- Our model is able to attain an accuracy of about 98% on the test set based on UCF50 dataset

Image Captioning using CNN Encoder and RNN Decoder

[code]

- Developed an attention-based model using Convolutional Neural Network Encoder and Recurrent Neural Network Decoder, which enables us to generate suitable caption for the given image.
- Used 30,000 images from MS-COCO dataset to train our model and achieved an average BLEU Score of 0.512

Lossy Image Compression Using SVD And FFT

[code] [paper]

- Developed an image compression algorithm by combining Singular Value Decomposition (SVD) and Fast Fourier Transform (FFT), and compared our proposed algorithm with CT Compression algorithm at different compression ratio in terms of Peak Signal-to-Noise Ratio (PSNR) and Structural Similarity Index Measure (SSIM) values.

A Comparative Study of Regression Algorithms for Predicting Graduate Admission

[code] [paper]

- Compared three well-known Regression Algorithms against the problem statement i.e to predict the chance of admission of a candidate to a university in the United States based on their profile metrics and established that Linear Regression is much better than other regression algorithms like Decision Trees and Random Forest in terms of accuracy to predict the chances of admission to a university or on similar types of data-sets when evaluated on unseen data.

Personal Projects

Multi Object Tracking Using MobileNet SSD | Python, OpenCV, dlib

[code]

- Implemented a multiple object tracking with the task of tracking more than one object in the user provided video using a pretrained MobileNet SSD caffe model.

Gesture Control | Python, OpenCV, Mediapipe

[code]

- Developed an application using python which uses computer vision techniques to control the mouse cursor through hand gestures using the webcam and perform basic tasks.

ImageColorizer | Python, OpenCV

[code]

- Build an application which uses a pre-trained model proposed by Zhang et al.'s 2016 ECCV paper Colorful Image Colorization to transform black and white images into beautiful colored images.

Publication(s)

Real Time Facial Expression Recognition using Convolution Neural Network Algorithm

[code] [paper]

- Author: Ayan Bag
- Journal: International Journal for Research in Applied Science and Engineering Technology (IJRASET)

Technical Skills

Languages: Python, JavaScript, HTML, Java

Developer Tools: Git, VS Code, Power BI, Gitlab, Jenkins

Technologies/Frameworks: Pandas, NumPy, Sklearn, Tensorflow, Matplotlib, Streamlit, OpenCV, Flask, Fitnesse