Saksham Garg

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Department of Information and technology
Galgotias college of engineering and technology, Uttar pradesh , India

EDUCATION

Dr APJ ABdul kalam technical university , India *Aug. 2019 – Present*

- BTech in Information and technology; Grade :77

DAV PUBLIC SCHOOL,India *Board :CBSE*

- Class 10th : Grade :9.2/10
- Class 12th : Grade :76/100

PUBLICATIONS

[1] Sanjay Kumar,Sahil Kansal ,Saksham Garg,Monagi , H. Alkinani ,Ahmed Elaraby ,Shanthi Natarajan and Vishnu Sharma , "Segmentation of Spectral Plant Images Using Generative Adversary Network Techniques" , in MDPI Electronics journal under the section of computer science and technology, vol.-11 , issue-16.[paper][code]

PROJECT EXPERIENCE

Flower Image Segmentation using GAN *Sep. 2021 – December 2022*

Research related Project

Supervisor: Prof. Sahil Kansal and Prof. Sanjay kumar khakil

- An image translation **pixel-to-pixel (p2p)** method for segmenting spectral images using a generative adversary network **(GAN)** is presented (accepted in [1]).
- The Discriminator and Generator models reached equilibrium after **32000** iterations.
- The model misclassified only 0.9 percent of the pixels resulting in **99.1 percent** accuracy.

Text Detection and Recognition Using CNN *February 2020 - march 2020*

- This project used a dataset which includes images divided into three parts - **Test , Train and validation dataset**.
- There are two different functions used to encode the labels in the dataset and to decode these labels from the output of the model **encode-from-labels** and **word-from-labels**.
- This model was created by using **Tensorflow** library and I tried to increase the accuracy of the model by using CNN with Bi-direction LSTM Layers
- This CNN model produced an accuracy of **60.216** and the letter accuracy of **80.752**. [code]

Create faces of the people that doesn't exist using DCGAN *July 2021 - August 2021*

- A **DCGAN** is a direct extension of the **GAN** described above, except that it explicitly uses convolutional and convolutional-transpose layers in the discriminator and generator, respectively.
- The discriminator takes a **3x64x64** input image, processes it through a series of **Conv2d, BatchNorm2d, and LeakyReLU** layers, and outputs the final probability through a **Sigmoid** activation function.
- The mean Discriminator Loss remains around 10 percent and the mean generator loss at less than 3 percent. [code]

Brain tumor detection using CNN *August 2022- present*

Semester project

Supervisor:Prof. Sanjay kumar khakil

- This project uses a dataset include Brain **MRI** images which are labelled as **No and Yes** , No means no tumor encoded as 0 and Yes means tumor encoded as 1.
- This Project uses **Transfer Learning** with **VGG-16** architecture and since the dataset is small ; therefore,**Data augmentation** is used to increase it's size.
- The validation Accuracy remains at **90**. [code]

Shopping website(AMAZON) created using React JS *March 2021 - April 2021*

- This website is built using- **React JS, Redux , Firebase**.
- The website includes Four separate sections -**Login page,Home page, Cart page , Payment page**.

- With the help of Firebase as a database server the user can create an account and then login through the same page after that the user can view and add item from the home page , the added items then can be edited in the cart page,the total payment can be paid through the payments. page[code]

Social Media website created using MERN *April 2021- May 2021*

- This Website is created using **MERN**(Mongo db, Express JS , Node JS and React JS).
- The user can create a simple post by filling out the details in a form which is on the right side of the website and the post will be visible in the left side of the page.
- The details about the posts is stored inside the database(**Mongodb**), **React Js** provides the frontend of the website and **Node Js , Express JS** together form the backend the website. [code]

Experience

Vedasis *March 2022 - April 2022*

Data science Internship

- Worked on a project where the objective of this project is to suggest hashtags to use for the Instagram posts using the post image provided by the user
- Dataset for this given project has been obtained from Raúl Gómez collection of **1M Instagram** posts with description.
- Using regular expressions like **word ninja ,nltk, and spacy** packages is used to process of extracting valuable tokens.
- Transfer learning was used with **Resnet50** pretrained model

Sarvacharya information and technology *July 2020- Sept 2020*

React developer

- Worked on creating the user interface for the fashion shopping website with the help of **React JS**,created the UI for multiple pages of the website and then integrated them with the backend using **Redux**
- Was given the responsibility as a project **lead** in one of the client project, coordinated and worked with the team to deliver the product on time
- Worked on few other React JS and HTML based client projects

Prof. Sahil Kansal and Prof. Sanjay kumar khakil *Sept 2021 - December 2021*

Research Internship

- Worked on creating an image translation **pixel-to-pixel(p2p** for segmentation of spectral images using generative adversary network **(GAN)** .
- Both the created Generator and Discriminator successfully reached a equilibrium after 32000 iterations
- The created model shows an accuracy of 99.1 percent

SKILLS

Programming: Python,C , C++ , Java , R , SQL , Oracle
Engineering Skills: Deep Learning, Data analysis,Data extraction, Full stack Web development(MERN stack), Firebase , Mongo DB
Frameworks:Tensorlflow , PyTorch , Keras , Torch , Scikit Learn , OpenCV