Saksham Garg

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EDUCATION

University College Dublin   *Sept 2023 - present*
- Msc in Information Systems

Dr APJ ABdul kalam technical university , India   *Aug. 2019 – 2023*
- BTech in Information and technology; Grade :7.75(highest:8.43)

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]

[2] Saksham Garg, Riya Gupta, Shubham Prashant , "" Accurate and Efficient Brain Tumour Segmentation using transfer learning and residual networks" , in IEEE at the ICAC3N-23.[paper][code]

PROJECT EXPERIENCE

Flower Image segmentation using GAN   *sept2021-Dec 2021*
- 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.[code]

This Person Doesnt Exist - DCGAN   *January 2023 - March 2023*
- 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]

Text Detection and Recognition Using CNN   *February 2021 - march 2021*
- 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]

Brain Tumor Segmentation using transfer learning and residual networks   *December 2022- March 2023*
- 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]

Shopping website(AMAZON) created using React JS   *July 2022 - August 2022*
- 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 *March 2022- April 2022*
- 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

Sarvacharya information and technology *July 2021- Sept 2021*
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

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

Brain tumour Detection and Segmentation *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: ReactJS , MongoDB , ExpressJS , NodeJS , Python,C, C++ ,Java , R , SQL , Oracle
Engineering Skills:Full stack Web development(MERN stack),Firebase , Mongo DB, Deep Learning, Data analysis,Data extraction
Frameworks:Tensorlflow , PyTorch , Keras , Torch , Scikit Learn , OpenCV