Seemakurthi Kushal Kumar

Gradute student from IIT Dharwad

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Summary

I'm a Deep_Learning enthusiast, Gradute from IIT Dharwad and curretly an Applied Scientist Intern @ Junglee Games. I'm quite an enthusiastic student and eager to learn new skills. Grasping knowledge is one of the most important motives for me and I learn new skills in no time. I'm highly motivated that I can work alone or Team.

Projects

Sentimental Analysis on Audio

For this project we are used in data set, which contains eight types of emotional audio. In this project we have used buch of libraries but one of the main libraries used is **Librosa**. In addition to that library we used tensorflows framework to deploy DL models along with that numpy also been extensively used. Using a librosa we extracted audio data into MFCCs of matrices of 54 X 44. Later to train the planning models where deployed several models such as **LSTM model, CNN model, LSTM + CNN model**.

Cifar10 data classifer

Here we used **Keras tuner** to tune hyperperameters such as: **Number of filters of conv2D layers, Rate of Dropout, Regularization Type and parameter, Number of hidden units of Dense layer, Learning Rate**. And then trained A TF model to Classify the images from Cifar10 dataset. Dataset for training available from keras.datasets. It has roughly 60,000 image dataset containing 10 types of classes. But, here considered only 6 of then have been considered. Saved the trained model as final_model_1_reg.h5, and got **75% accuracy** for the test data set it contains roughly 6000 images.

SIMULATING SELF-DRIVING CAR

This Project is based on Deep learning to model to make a simulating car operate on a trained Deep Learning model. By taking screen recording and speed of the Vehicle as the input to the model. The model progressed from the basic ML model to the **CNN applied Deep Learning Neural Networks**.

MUSIC-RECOMMENDATION

Here we made a recommendation system that works on the ML algorithm. And I've modeled a system that can play similar songs and clustered songs of resonating feel. In this, we used various ML techniques such as **Recommendation systems(Collaberative filtering), K-means, KNN, dbscan, PCA** etc.,

Face Emotion Detection

Here we used opencv to detect the faces using cam as well as the screen capturing. And then trained A TF model to detect the emotion the fce pocess. Dataset for Facial Emotion Detection is available on Kaggle. It has roughly 36,000 image dataset containing 7 types of emotions. But, here considered only 4 of then have been considered. Those are : Happiness, Surprise, Neutral, Disgusted. And By saving the trained model Facce_emotion.h5 and basic opencv face detection, we can predict the face emotion of a person using cam, as well as using Sreen capturing .

Titanic Survival prediction

Here we used a Machine Learning to predict the survival of the passenger of Titanic. Its a Logistical regression which Yeilds accuracy of 80% on test dataset.

Skills

Programing Languages: python, C++, Matlab, HTML, Javascript

Libraries: TensorFlow, Keras, librosa, RegEx,pandas, opencv, NumPy, Seaborn, Matplotlib, Scikit-Learn, Bootstrap

Techniques: Machine Learning, Deep Learning, Image Processing, Data Structures, Algorithms, Object-Detection, PID Controls

Education

Mechanical Engineering @ IIT Dharwad

Initially, I opted for Mechanical Engineering at IIT Dharwad, completing 1st year I got interested in programming. I opted for courses such as Machine Learning, Deep Learning later. My present working areas are Machine Learning, Deep Learning, Computer Vision, Competitive coding Python.

My current CPI: 7.59

12th Class @ Sri Chaitanya Academy Junior College

I pursued MPC (Mathematics, Physics, Chemistry) course.

scored 962(out of 1000).

Experience

Applied Scientist Intern @ Junglee Games

Presently Working as Intern at Junglee Games. (Aug 2021 - **Present**)

Data Science Intern @ Kaglorsys Technologies Pvt. Ltd

Presently Working as Intern at Kaglorsys Technologies Pvt. Ltd. (June 2021 - July 2021)

Member of Dial Organizing Team @ IIT Dharwad

I've been a member of organising team of Dial Program conducted at IIT Dharwad. DIAL @ IIT Dh, 2019.

Student Mentor @ IIT Dharwad

I've been a mentor to students at IIT Dharwad as a part of Mentorship program. (Aug 2018 - May 2019)

Certification

Machine Learning @ Coursera, Opted Machine Learning Course instructed in Coursera by Andrew Ng. 🔗	Structure Machine Learning Project @ Coursera. 🔗	Improving Deep Neural Networks: Hyperparameter Tuning, Regularization and Optimization @ Coursera, Opted this Course in Coursera instructed by Andrew Ng. 🔗	Neural Networks and Deep Learning @ Coursera, Opted this Course instructed in Coursera by Andrew Ng. 🔗

Languages

English(Professional working proficiency), **Telugu**(Native), **Hindi**(Professional working proficiency)

Achivements & AWARDS

Been at 98.7 percentile

When I've given JEE Advance I've been in top 98.7 percentile of the total applicants.

District 2nd ranker

I've been District 2nd ranker in Maths & science Olympiads conducted by SOCIETY FOR ADVANCEMENT OF SCIENCE & TECHNOLOGY

Participated in DevHack 2.0

We made a prototype of sensory mobile device that can sense various factors for a crop in DevHack 2.0 in Parsec (IIT Dharwad Tech meet 2020). Sponsed by GitHub.