SOUMYAJIT ROUT

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EDUCATION

Veer Surendra Sai University of Technology   Burla, Odisha, India 768018
B.TECH IN COMPUTER SCIENCE AND ENGINEERING   2017-2021

EXPERIENCE

Digital Tesseract   Chennai, India
ML & AI Intern   APR 2020 - JUN 2020

- Build a Data explorer app using Streamlit for some standard Machine Learning datasets.
- Written and published articles on various Machine learning concepts.

KM UnoTag Pvt Ltd   Bangalore, India
PROJECT INTERN   JUL 2019 - NOV 2019

- Worked on a reward system that gives registered users rewards on scanning a valid QR code.
- Built a chatbot using Dialogflow that interacts with the user and handles the reward system.

Center for Development of Advanced Computing (C-DAC)   Pune University Rd, Pune, India
STUDENT INTERN   DEC 2018 - JAN 2019

- Training internship on High Performance Computing, Linux, Machine Learning and Deep Learning.

PERSONAL PROJECTS

Face Image Reconstruction using SFSNET and GANs

- Implemented a research paper on SFSNET for Image reconstruction in Tensorflow framework.
- Modified the model's architecture by using SFSNET as the Generator in a GAN model.
- Created custom layers, loss function and model training function.

Poem Generator

- Preprocessed a text corpus of poems containing punctuation, numbers and various symbols.
- Built and trained a RNN model using Tensorflow for word level sentence generation and achieved 98% accuracy.
- Deployed the model as a web app using Flask and designed it using HTML and CSS.
- Hosted the web app on Heroku.

Object Detection and Counting of Objects

- Using images of delivery boxes, annotated with labelmg software, trained a custom object detector model with YOLO in Tensorflow.
- Captured a video with OpenCV and detected the objects in a video and displayed the total number of packages in the frame, which helps in monitoring the average amount of packages passing through the footage.

Emotion Recognition using OpenCV and CNN

- Trained a Convolutional Neural Network model using FER-2013 dataset to classify facial expressions.
- Using Haar Cascade in OpenCV detected faces from image/video input and used them to feed the CNN model for classification.

TECHNICAL SKILLS

- **Languages & Technologies:** Python, C/C++, JavaScript, Dart, SQL, HTML, CSS
- **Libraries & Frameworks:** Tensorflow, OpenCV, nltk, Pandas, Streamlit, Flask, Django, BeautifulSoup, Flutter
- **Softwares:** Git, Github, DialogFlow, Jupyter, Spyder, Andriod Studio
- **Machine Learning:** Neural Networks, CNNs, RNNs, GANs, Reinforcement Learning