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EMPLOYMENT

Software Engineer II(Machine Learning Engineer) 63 Moons Technologies Jan 2021 – Present.

- **Language Translation:**
  - I did research on custom language translation using encoder decoder architecture with long short term memory(lstms) .
  - Created a proof of concept where the aim was to develop a multilingual translation model, developed a custom language translation model using encoder-decoder with keras and tensorflow as backend for the poc.
  - Did another poc using Hugging Face library's mbart-50 multilingual encoder-decoder model.
  - The translation was between regional Indian languages and English.
  - Developed a flask application for both the poc's for the demo purpose.

- **Person Counter:**
  - Developed a Person counter application for counting the total number of people entering and exiting a place in different camera configurations.
  - The technologies used for developing the application was: yolov3, single shot detectors(SSDs) for object detection, centroid tracking algorithm and dlib library for tracking people, opencv for basic preprocessing, flask framework,basic html and css for developing the web application.

- **Automatic license plate detection and reading the number on license plate**:
  - Developed a model that captures the car, the license plate of the car from videos and then recognizes the numbers on the number plate.
  - The technologies used for developing the model was: yolov3 for object detection and license plate detection, opencv for basic video preprocessing, pre-trained character segmentation model for recognising the numbers on the license plate, flask framework,basic html and css for developing the web application.

Software Developer(Machine Learning Engineer) XYZ innovations Dec 2019 – Dec 2020

- Worked as a part of the machine learning team to solve various problems related to image processing

- **Indoor Image Segmentation:**
  - Developed a model for detecting the amount of work done in indoor construction sites.
  - The Model was developed using Unet architecture from scratch.
  - Libraries used for developing the model were:deep learning libraries like keras with tensorflow as backend for developing the main model, opencv for image preprocessing and augmentation, numpy for image augmentation.

- **Outdoor Image Segmentation:**
  - Developed a semantic segmentation model for construction sites to classify various stages of outdoor construction.
  - The Model was developed using Unet architecture. In the encoder part I used a transfer learning technique, where I used vgg 16 as the encoder and the decoder was developed from scratch based on the encoder layers.
  - Libraries used for developing the model were:deep learning libraries like keras with tensorflow as backend for developing the main model, opencv for image preprocessing and augmentation, numpy for image augmentation.

Machine Learning Intern Bridgelabz Solutions LLP June 2019 - Dec 2019

- I was working as a fellowship engineer in a machine learning team where I was trained on python and machine learning concepts.
- Developed a very basic conversational bot using Rasa Framework.
- Worked on different problems (tasks assigned) like sentiment analysis, classification problem, regression problem.
- Implemented single layer neural network and multilayer neural network from scratch.

SKILLS

- **Programming Language** -Python.
- **Operating System** –Linux, Windows 10.
- **Database** - Basic knowledge of SQL.
- **Machine & Deep Learning Libraries** - Keras, Tensorflow, Sklearn, pandas, numpy, matplotlib, seaborn
- **Image Processing** - Opencv, skimage, PIL, transfer learning, Semantic segmentation, image preprocessing, Object Detection.
- **NLP** - Sentiment Analysis, Chatbot (rasa framework), Text cleaning & preprocessing(nltk), Sequence to Sequence (Encoder Decoder), Recurrent Neural Networks, LSTMs, Intent Detection,spacy library.
- **Tools** - Visual Studio Code, Pycharm, Jupyter Notebook, JupyterLab, spyder, google colab, meshlab, cloud compare, labelbox.
- Good Knowledge of Convolutional Neural Networks, Artificial Neural Networks.
- Basic Knowledge of CUDA, Github, pointclouds.
- Basic Knowledge of deploying models using Flask.

EDUCATION

Karjat, India **Konkan Gyanpeeth College of Engineering** **July 2015 - May 2019**

Specialization: Electronics and Telecommunication
CGPA: 8.01

PROFILE LINKS

- **GitHub Profile:** https://github.com/samruddhichitnis02/
- **Stack Overflow Profile:** https://stackoverflow.com/users/11802944/samruddhi-chitnis
- **LinkedIn Profile:** https: /www.linkedin.com/in/samruddhi-chitnis