SHIVAM SONI

Technology enthusiast and a quick learner who strives to deliver excellence. I have worked on solid quality projects in the field of ML, DL and IR and have 1+ year Research Experience working in Natural Language Engineering (NLE) Lab at University of Hyderabad.

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EDUCATION

M.Tech - Artificial Intelligence

University of Hyderabad

07/2018 – Present | Hyderabad | CGPA: 8.03

Relevant Courses:

- Pattern Recognition
- Machine Learning
- Business Data Analytics

B.Tech - Computer Science and Engineering

Graphic Era University

08/2013- 07/2017 | Dehradun | CGPA: 8.1

Relevant Courses:

- Operating System
- Data Structures
- Computer Architecture
- DBMS
- Computer Networks

SELECTED PROJECTS

Transliteration(1/2020-2/2020)

Deep Learning: NLP

- The projects aims at converting Hindi text from Roman/Latin Script into Devanagari Script. Employed an Encoder-Decoder architecture and compared simple RNNs with LSTMs and GRUs.
- Additionally, also used an Attention based mechanism with Teacher Forcing concept to further enhance the accuracy from 63.53% to 69.01%.
- **Technologies used:** Python, Pytorch, Matplotlib

Chatbot Using Hybrid Multi-Level Model (HMLM) (11/2019 – 12/2019)

Deep Learning: NLP

- The project employs a hybrid architecture which contains 3 layers: Classifier Layer(CL), Matching Layer(Mtl) and Generative Layer(GL).
- The first layer (CL) uses SVM-classifier for domain-based inputs followed by a cosine similarity function in MtL. Gl uses a seq2seq model for non-domain based inputs. We acheived classifier accuracy of 0.83 and bleu score of 0.31 compared to the state-of-the-art.
- **Technologies used:** Python, Pytorch, sklearn, Matplotlib

Image Classification Using Transfer Learning (08/2019 – 09/2019)

Deep Learning: Computer Vision

- Employed different pre-trained models for transfer learning(TL) to classify CIFAR10 dataset which has 10 classes, for e.g, VGG19, InceptionNet and ResNet which are trained on Imagenet dataset with 1000 classes. Enhanced the test accuracy from 54.23% to 56% using TL.
- **Technologies used:** Python, Pytorch,Matplotlib

Customer Churn Prediction (09/2018 – 11/2018)

Machine Learning: Classification

- The project aims to predict future churn behavior of the customers from the data taken from a telecommunication company.
- Employed different feature extracting techniques and classifiers like- SVM, Naive Bayes, Logistic Regression, Random Forest etc. and performed T-test to conclude the best model and features.
- **Technologies used:** Python, Sklearn, Pandas

WORK EXPERIENCE

Full Time Job

Dolcera

1/2021 – Present | Hyderabad (WFH)

Analyst

- Proficiency in Writing Queries on PCS Tool.
- Worked on Portfolio Analysis.
- Worked on IP projects like Categorization of Patents, Prior Art Searches And Mapping.
- **Technology Used** : Python, BeautifulSoup, PCS tool, PC1.0, RPX.

Internship

FlyingJSR

10/2020 – 1/2021 | Dehradun

Software Developer

- Retrieving data from ecommerce websites using Web Crawler, Scrapper and APIs for further analyses.
- **Technology Used** : Python, BeautifulSoup, Devtool, Xpath 1.0, Flask.

NLE LAB, University of Hyderabad

Link: NLE LAB

05/2019- 06/2020 | Hyderabad

Semantic Textual Similarity

- *Supervisor:* Prof. K. Narayana Murthy
- Semantic Textual Similarity (STS) is the task of computing upto what degree the two sentences are similar in meaning.
- Developed a hybrid architecture by combining Deep Neural Nets with traditional KACB methods and passed it into a regressor model for predicting similarity scores.
- We achieved a correlation score of **0.787**, improving upon the traditional approaches and stood among top 5 benchmark results.

TECHNICAL SKILLS

C | C++ | Python | sklearn | Pandas | matplotlib | Pytorch | Flask | RASA

COURSES

- **Deep Learning Specialization (One Fourth Labs, IITM) (03/2020 – 5/2020)**
- **Natural Language Processing by NPTEL - Online (10/2019 – 11/2019)**