PRAGATI KUMAR SINGH

EDUCATION

Indian Institute of Science, Bangalore *July 2018 - Present*
Masters of Technology in Computer Science
Department of Computer science and Automation
Current CGPA: 7.9

Rajkiya Engineering College, Bijnor Passed in 2017
Bachelors of Technology in Information Technology
Department of Information Technology
Overall Percentage: 77.3

Kendriya Vidyalaya R.D.S.O., Lucknow Passed in 2012
Intermediate
Overall Percentage: 75.4

Kendriya Vidyalaya R.D.S.O., Lucknow Passed in 2010
Metric
Overall CGPA: 9.0

PROJECTS

Consolidation of visual semantics in multimodal word representation **Working**
M-Tech Project
Advisor : Prof. Ambedkar Dukkipati

There are various modalities to represent an information. Since each information is present in different modalities and there is a great heterogeneity gap among different modalities, there is a need to find an efficient way of consolidating different semantics and effectively learn the multimodal representation. In this work, we will try to come up with a robust multimodal model that includes visual semantics in word representation.

CricPredic - Over by Over Cricket win predictor for ODI match **Nov 2019**
Data Analytics Course Project
Advisor : Prof. Rajesh sundareshan and prof. Ramesh hariharan

Given a situation in the second innings of an ODI (One Day International) match, our model predicts the winning probability of currently batting team. We also built a Graphical User Interface for this project where on giving the match instance information, we get winning prediction.

Community Detection in a Network **Oct 2019**
IISc Course Assignment : Data Analytics

The aim of our project is to use the Fiedler-vector and Louvain method to identify the two communities in a bottlenose-dolphins network

Prediction of Mars' Orbital Plane **Sept 2019**
IISc Course Assignment : Data Analytics

Use mars opposition data (data collected by Tyco Brahe and used by Kepler) to find the projection of Mars position on the ecliptic plane and the distance of this projection to the centre. Find the best fit

circle of mars orbit (assuming it lies in ecliptic plane) using the triangulation dataset.
Second part of it was to, using opposition and the geocentric latitudes of Mars, find the corresponding heliocentric latitudes of Mars. This is done as a course assignment in Data Analytics.

Cricket Score Prediction using Duckworth-Lewis Method **Aug 2019**
IISc Course Assignment : Data Analytics

The task is to find the best fit run production functions in terms of wickets-in-hand(w) and overs-togo(u). The given data file contains data on ODI matches from 1999 to 2011. The model assumed is as follows: Z(u,w)=Z0(w) (1exp(-Lu/Z0(w)). To solve this problem I have used linear regression method to minimise the loss function of the actual score and predicted score. This is done as part of course assignment in Data Analytics.

Adversarially Regularized Graph Autoencoder For Graph Embedding **Feb - April 2019**
Machine Learning Course Project
Advisor : Prof. Ambedkar Dukkipati

Graph Embedding is an effective method to represent graph data in a low dimensional space for graph analytics. This Framework encodes the topological structure and node content in a graph to a compact representation, on which decoder is trained to reconstruct the graph structure. Furthermore, the latent representation is enforced to match a prior distribution via an adversarial training scheme

Unsupervised Learning Task of Clustering **Oct 2018**
IISc Course Assignment
Advisor: Prof. M. Narasimha Murty

Design and implement an unsupervised learning task of clustering similar data points using k-means and spectral clustering algorithms. This project deals with eigenvalues, eigenvectors and one of their numerous applications, namely clustering. K-means and Spectral Clustering have been applied to two different datasets and observed the differences

Reconstruction and Classification of MNIST Dataset by KNN Classifier **Sept 2018**
IISc Course Assignment
Advisor: Prof. M. Narasimha Murty

MNIST is a handwritten dataset, originally has 60,000 digits with 784 (28x28) dimensions in its training set. In this assignment, a subset of MNIST dataset has been taken into account for reconstruction task using truncated SVD for different values of d and Reconstruction Error (RMSE) is calculated.

WORK EXPERIENCE

Schlumberger (PuTC), Pune May 2019 - July 2019
Data Scientist Intern

Automated Depth Matching **May 2019**
Mentor : Mr. Saood Shakeel (Data Scientist @Schlumberger)

The project objective was to come up with a robust solution that would take two de-synchronized

logs and will output a mapping that would map each point from one log to the other

Autocorrecting Stratigraphic Layers Of Seismic Slice **June 2019**
Mentor : Mr. Sunil Manikani (Data Scientist @Sclumberger)

The project objective was to come up with a robust solution that would take a slice of seismic data and automatically correct the incorrect labelling of stratigraphic layers

COURSES

Machine Learning, Practical Data Science, Data Analytics, Deep Learning, Computational Methods of Optimization, Linear Algebra and Probability, System Security, Cryptography, Design and Analysis of Algorithm, Distributed Computing System.

TECHNICAL SKILLS

Basic Knowledge	Pytorch, Pyspark, C, C++
Intermediate Knowledge	Python, Tensorflow, Keras, Scikit-learn, numpy, pandas, Git

ACHIEVEMENTS

- Got an All India Rank 59 in GATE 2018 with a percentile of 99.95.
- Ranked among top 10 in the Data Science Hackathon organized on Kaggle Platform.(With prediction Accuracy of my model - 99.317%)
- Gold Medalist in Rajkiya Engineering College for the session 2013-2017.
- Got selected for Regional level science exhibition for the model based on Generating electricity using salt water.
- Got first prize in cluster level sketching competition.
- Got selected for Regional level sketching competition.

INTERESTS AND ACTIVITIES

- Event coordination : Organized various cultural events @SPANDAN 2k16.
- Hobbies : Problem Solving, Playing badminton, Reading books

PERSONAL DATA

Place and Date of Birth :	Rajasthan, India. 20 Aug 1994
Address :	Rajajipuram, Lucknow, Uttar Pradesh, India
Email :	harsh.pragati.kr.singh@gmail.com
LinkedIn :	linkedin.com/in/pragati-kumar-singh-1888aa179