SWYAM PRAKASH SINGH

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EDUCATION

Indian Institute of Science, Bangalore   *August 2018 – July 2020*
Masters in Technology (Computer Science)   Overall GPA: 8.4
Department of Computer Science and Automation

Harcourt Butler Technical University, Kanpur   *July 2013 – June 2017*
Bachelors in Engineering, (Electronics)   Overall Percentage: 71.88%

EXPERIENCE

Aug, 2020 - present   Software Engineer 2, Citrix R & D, Bangalore Urban

- Worked with Provisioning Team in Citrix on various project like zero shot agent deployment with desired password.
- Worked with unified-management team for unified app design which give client an option to access all Citrix application from one app.

PROJECTS

- ## Graph Neural Networks for Text Classification
  Advisor: Prof. Shirish Shevade

  1. Extend Graph attention network to text classification.
  2. Inspired from work TextGCN by Yao et al. (2019), which uses GCN to classify documents.
  3. Explored construction of graph from text, convolution over graph, attention mechanism.
  4. Accuracy: 97% on R8 dataset, 76.45% on MR dataset, 58.42% on Ohsumed dataset

- ## Framework for Set Matching and Bipartite Hypergraph
  Advisors: Prof. M. Narasimha Murty and Prof. V. Shusheela Devi

  1. Given a bipartite hypergraph and we aim at capturing relations between node pairs from the left and right hyperedges. It can be also seen as set matching problem.
  2. Designed a framework to predict the relation(link) between left and right hyperedges.
  3. **currently under submission**

- ## Aggregating Graph Embeddings
  Advisor: Prof. M. Narasimha Murty

  1. Aim was to increase F1-scores for node classification tasks by aggregating embeddings from different mechanisms.
  2. algorithm used was node2vec, LINE , SDNE, and many more.
  3. The motive was to exploit the fact that different representation mechanisms capture different characteristics of a graph, so combining them might work better.

- ## Cascading Graph Representation Learning with Unsupervised Deep Embedding Clustering
  Advisor: Prof. Ambedkar Dukkipati

1. The main aim was to analyse the difference between results on node classification and link prediction obtained by two different methods node2vec and GCN.
2. Other task was to use the representation obtain by GCN with Unsupervised deep Embedding Clustering.
3. Went through Unsupervised deep embedding clustering, node classification and link prediction.

• Convolutional Neural Networks for Sentence Classification using tri-char grams
Advisor: Prof. Shirish Shevade

1. Aim was to use tri-char grams for sentence classification using CNN
2. Explored different word embedding like Word2vec, Glove and technique like CNN over text.
3. dataset: SST, accuracy : 39.7%

MINI PROJECTS

• Apparel Identification System using Convolution Neural Network (Project AI)
Accuracy: 66.86% on CIFAR-10 dataset , 90.31% on F-MNIST dataset

• Multi-Layer Neural Network Implementation from Scratch
Accuracy:93.08%, with ReLu, Xavier (Gaussian) on MNIST dataset and 62.68%, with ReLu , Xavier(Gaussian)

on Cat-Dog dataset

TECHNICAL STRENGTHS

Languages/Libraries	C, C++, Python, NumPy, Scikit-Learn, PyTorch, Tensorflow, React
Software & Tools	MS Office, Git & LaTeX

COURSES

- Machine Learning
- Practical Data Science
- Topics in Pattern Recognition
- Linear Algebra and Probability

- Design & Analysis of Algorithm
- Deep Learning for NLP
- Data Analytics
- Cryptography

ACHIEVEMENTS

- **GATE 2018**
Secured All India Rank 6 in GATE (CS/IT) 2018, GATE score 985
- **TECH-ERA**
Head of technical team at TECH-ERA 2016 (technical fest, Electronics Dept., HBTI Kanpur)
- **Robowars, Mecharnival, HBTI**
Stood first in *Robowars* in MECHARNIVAL 2014 (technical fest, Mechanical Dept., HBTI Kanpur)

EXTRA-CURRICULAR

- Volunteered OPEN DAY fest 2019, 2020 celebrated in IISc Bangalore
- Volunteered CSA Summer School event 2019, organised by Dept. of CSA, IISc Bangalore
- Member of EntIISc (an entrepreneur club in IISc Bangalore)