Bhashithe Abeysinghe

Presidential Fellow
Transcultural Conflict and Violence Initiative
Georgia State University

Research Interesets

Main focus of study is to address the use of deep learning techniques to create models in different domains which classify high dimensional data. Practical application of the study was to detect sentiments of short sentences such as twitter posts by creating generalized sentiment classifiers using deep neural networks and recurrent neural network models. While trying to address the problem, I have explored the areas of Machine learning, Deep Learning, Natural Language processing, High Performance Computing and Distributed Computing. Other interests lie in the areas of reinforcement learning and multi-agent systems.

Education

- B.Sc in Computer Science. University of Peradeniya, Peradeniya, Sri Lanka, May 2017.

    - GPA: 3.702
    - First Class Honours

Professional Experience

- Presidential Fellow under Trans-cultural Conflict and Violence initiative. Georgia State University, Atlanta

- Temporary Lecturer (2017-May - 2018-June) - University of Peradeniya, Sri Lanka. Developing a generalized framework for sentiment classification of twitter posts.

- Temporary Demonstrator (2017-January - 2017-May) - University of Peradeniya, Sri Lanka. Creating software infrastructure using a computer cluster to perform cpu intensive programs such as neural networks optimization.

- Visiting Demonstrator (2017-May - Present) at Postgraduate Institute of Science, University of Peradeniya.

- Data Science Intern (2016-September - 2017-January) Used Natural Language Processing techniques to cluster customer complaints of a telecommunication service provider, N-Able (Pvt) Limited.

Honors & Awards

- Department of Statistics and Computer Science Alumni Prize for Excellence in Computer Science

- University Award for Academic Excellence

Experience

I was able to gain experience in teaching as a temporary lecturer under supervision of a professor.

- CS104 Structure Oriented Programming Practical (undergraduate class) Semester 1, 2018

- CS314 Image Processing Practical (undergraduate class) Semester 1, 2018

- BC201 Basic Computing (undergraduate class), Semester 1, 2017.

- CS202 Data Structures Practical (undergraduate class), Semester 1, 2017

- CS204 Programming using Database Management Systems (undergraduate class), Semester 2, 2017

- CS308 Computer Graphics Programming with OpenGL (undergraduate class), Semester 2, 2017

Publications

Peer reviewed Conference Proceedings

- T. M, M. B. B Abeysinghe, B. J. Gunethilaka, R. D. Nawarathna "Opinion mining on various aspects of health through social media analytics using collective sentiment feature analysis and deep neural networks", (2016) Proceedings of iPURSE November 4-5th 2016

Ongoing work

- Behaviour of deep learning models in short length documents such as tweets.

- Contribution of climate conditions for growth of plants - A time series analysis.

Technical Listings

- Comfortable in creating neural networks for deep learning using PyTorch, Keras and Tensorflow for python.

- Familiar with Deep Neural Networks, Recurrent NNs, GRUs, LSTMs and GAN for semi-supervised applications.

- In other domains, I have used logistic regression, Naive Bayes classifier and SVM also in a mediocre level.

- Model selection mechanisms as Cross validation and Grid search

- Setup, configure and use SLURM computer clusters, Apache Spark

- Setup, configure and use GNU/Linux systems and a fond member of Free Software Foundation