Murali Raghu Babu Balusu

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EDUCATION

Georgia Institute of Technology   May 2018 (Expected)
Master of Science in Computer Science, Specialization: Machine Learning   **GPA: 4.0/4.0**
Courses: Machine Learning, Advanced Computer Vision, Computability and Algorithms,
Vision and Language, Natural Language Processing, Web Search & Text Mining

Indian Institute of Technology (IIT), Guwahati   June 2016
Bachelor of Technology, Computer Science and Engineering   **GPA: 8.46/10**

EXPERIENCE

Deep Learning Models for Text Summarization   Summer 2017
Amazon AI, SDE Intern   *Seattle, USA*

· Developed a recurrent neural network based hierarchical sequence-to-sequence model that uses attention and pointer networks for both extractive and abstractive summarization in mxnet.

Encoding constraints into Community Detection algorithms   2015 - 2016
IIT Guwahati, Undergraduate Thesis   *India*

· Developed a constrained spectral community detection algorithm that can incorporate domain specific degree-of-belief constraints about the clustering structure of the network to obtain better clusters.

Graduate Teaching Assistant, Georgia Tech   2016 - Present

· Computability and Algorithms in Fall 2017, Natural Language Processing in Spring 2017 & Database Systems in Fall 2016.

SKILLS

Languages	Python, C++, C, Matlab, RStudio
Others	Git, MXNet, PyTorch, DyNet, Keras, Tensorflow, NLTK, Stanford CoreNLP

PROJECTS

Overcoming Language Variation in POS Tagging using Social Attention   Ongoing

· Working on building a novel attention-based neural network model that exploits social networks to make POS tagging more robust to social language variation.

Modeling Compositionality in Visual Question Answering (VQA)   Ongoing

· Exploring Relational and Dynamic Memory Networks to build VQA models that are more visually grounded and have more reasoning ability.

Text to Image Synthesis using GANs   Spring 2017

· Investigated various models using generative adversarial networks GANs to generate a sequence of images based on the context extracted from a textual description.

Scene Recognition with Deep Learning   Fall 2016

· Implemented AlexNet and VGG deep learning neural networks for the task of Instance Scene Recognition on the 15 class scene dataset. Achieved upto 90% accuracy.

Sentiment Analysis and Summarization of Online Reviews   Spring 2016

· Designed and built a machine learning model to extract the key positive and negative sentiments from the IMDB reviews with respect to various aspects and provide a brief summary to the users.

Hidden Markov model for Speech Recognition   Fall 2015

· Built an isolated word recognition system using a Hidden Markov Model for each word and identifying the word based on the highest model likelihood.

Initially Labeled Learning in Non-Stationary Environments   Summer 2015

· Developed an algorithm using an under-sampling approach combined with an ensemble approach to improve the model's performance in classification of non-stationary data.