

Murali Raghu Babu Balusu

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📄 github.com/bmurali1994

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.