

# Krishna Prasad Sankaranarayanan

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## EDUCATION

### UNIVERSITY OF MASSACHUSETTS AMHERST M.S IN COMPUTER SCIENCE

Expected May 2019 | Amherst, MA  
Cum. GPA: 3.7/4.0

### MADRAS INSTITUTE OF TECHNOLOGY B.E IN COMPUTER SCIENCE

July 2013 - May 2017 | Chennai, India

## LINKS

LinkedIn:// krishna-sankar

Github:// Krishna-Sankar

## COURSEWORK

### GRADUATE

Natural Language Processing

Machine Learning

Deep Learning

Distributed and Operating Systems

Algorithms for Data Science

Artificial Intelligence

Information Retrieval

Reinforcement Learning

### UNDERGRADUATE

Database Management Systems

Operating Systems

Software Engineering

Web Design

## SKILLS

### PROGRAMMING

Proficient:

C • C++ • Java • Python • C#

• Javascript

Familiar:

MATLAB • R • PHP • Ruby

### DATA/DATABASES

Hadoop • SQL Server • Elastic Search

### FRAMEWORKS

TensorFlow • Keras • Numpy

• Scikit-learn • Matplotlib • Pandas

## TECHNICAL INTERESTS

Machine Learning

Natural Language Processing

## EXPERIENCE

### QUALCOMM | DATA SCIENCE INTERN - NLP

May 2018 - Aug 2018 | San Diego, CA | Keras

- Implemented an end-to-end ML pipeline including data mining, cleaning and feature engineering of text data in documentation and customer cases.
- Developed a Q&A tool for automated answering of customer cases with documents and release notes.
- Optimized documentation search using NLP and Information retrieval techniques like topic modelling and achieved an improvement of about 9% over the test set.

### UMASS AMHERST, INFORMATION EXTRACTION AND SYNTHESIS

LABORATORY | NLP RESEARCHER | ADVISOR : ANDREW MCCALLUM

Jan 2018 - May 2018 | Amherst, MA | TensorFlow, Python

- Built a seq2seq model for transformation of word problems into algebraic equations and solved them using Structured Prediction Energy Networks.
- Compared the SPEN model to a greedy baseline approach to determine the effectiveness of modeling structural dependencies and henceforth, got an improvement of 7% on 100 different equation templates.

### UMASS AMHERST, COMPUTER VISION LAB | RESEARCH ASSISTANT

Jul 2017 - May 2018 | Amherst, MA

- Led a 3 member team implementing a crop recommendation system wherein, profitable plants for each land type are recommended by collaborative filtering.
- Assessed yield using classified satellite images & Ground truth statistical data.
- Demonstrated that crop image classification considering both spectral and spatial features in turn betters the recommendation precision by 6%.

## PROJECTS

### SCIENTIFIC AUTHOR NAME DISAMBIGUATION - DATASETS, MODELING AND INTERACTIVE METHODS. August 2018 - Present

- Implementing Neural Network based approaches for modeling similarity between research paper titles for use in existing name disambiguation systems.
- Designing new query selection strategies that extend the typical pairwise setting to cluster/entity wise setting.

### NEURAL TRANSLATION FOR LOW RESOURCE LANGUAGES USING COMPARABLE CORPORA | ADVISOR : BRENDAN T.O'CONNOR

September 2017 - January 2017 | NAACL HLT 2018

- Built an end-to-end Siamese bidirectional RNN to generate parallel sentences from comparable multilingual articles in Wikipedia.
- Proved that using the enriched dataset improved translation accuracies by 11% on both Neural & phrase-based translation systems for English-Tamil sentence pairs when compared to training on carefully curated bilingual corpora.

### CHARACTER IDENTIFICATION IN MULTIPARTY DIALOGUES | ADVISOR : ERIK LEARNED MILLER Oct 2017 - Dec 2017

- Constructed an Agglomerative CNN to learn mentions and mention-pair embeddings followed by which an heuristic entity linker assigns character labels to each co referent cluster.
- Obtained a character identification accuracy of 85% (on the main 6 characters) on the episodes of the Friends TV Series dataset.