Vishakh Padmakumar

Education

2020–Present **PhD Student**, *Center for Data Science, New York University (NYU)*, NY, *CGPA – 3.9/4*.
Advisor: Dr. He He
Area: NLP and text generation

2018–2020 **Masters in Computer Science**, *Courant Institute of Mathematical Sciences, New York University (NYU)*, NY, *CGPA – 3.95/4*.

2014–2018 **Bachelors in Information Technology**, *National Institute of Technology (NIT) Karnataka*, Surathkal, *CGPA – 8.75/10*.

Experience

Research

Aug 2020 - Present **Machine-In-The-Loop Creative Writing**.
Collaborators: Dr. He He
Project to examine if machines can work in collaboration with humans to aid them in the task of creative writing and adaptively learn to provide more effective assistance with time
Additionally aim to collect a dataset of interactions that iteratively edit a document to completion

Oct 2019 - Aug 2020 **Unsupervised Extractive Text Summarization**.
Independent study to use pointwise mutual information to formulate metrics of relevance and redundancy for the task of extractive text summarization.
Currently under review at EACL 2021

Jan-Jun 2020 **Political Science Stance Classification**.
Collaborators: Dr. Zhanna Tereschenko, Dr. Jonathan Nagler, Dr. Josh Tucker, Dr. Rich Bonneau
Examined the effect of transfer learning on social media data (Poltical Twitter, Wikipedia hatespeech comments) for the challenging task of political stance classification using deep learning based language models
Currently under review at the journal Political Science Research Methods

Aug-Dec 2019 **Multi-Modal Content Similarities in Online Disinformation Campaigns**, *Ext. Abstract*.
ACM Conference on Collective Intelligence, June, 2020.

Jan-May 2019 **Transfer of Reinforcement Learning in a Natural Language Action Space**, *Paper*.
Project to explore if the knowledge learned by a reinforcement learning agent trained to play a text-based interactive game could be transferred to a different natural language action space.

Jul 2017 - May 2018 **A Robust Approach to Open Vocabulary Image Retrieval with Deep Convolutional Neural Networks and Transfer Learning** , *Paper*.
Collaborators: Dr. Sowmya Kamath
2018 Pacific Neighborhood Consortium Annual Conference and Joint Meetings (PNC). IEEE, 2018.

Positions Held

LinkedIn, Github, Blog
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May-Aug 2019 **Machine Learning Intern**, **Laer.AI**, New York, NY.
- *Guide(s):* Dr. Igor Labutov, Dr. Bishan Yang
- *Field of exposure:* Natural Language Processing, Machine Learning
- *Project:* Worked on the problem of document retrieval from an unstructured database for the purpose of semantic question answering. Designed and collected a structured dataset using an active learning pipeline.

Oct 2018 - May 2020 **Graduate Research Associate**, **Center for Social Media and Politics, NYU**, New York, NY.
- *Field of exposure:* Natural Language Processing, Deep Learning
- *Project:* Developed and released a package for text classification of social media data using deep learning and runbenchmarking tests against traditional models. Currently in use by over 25 political science researchers at NYU

May-Jul 2017 **Software Development Intern**, **Microsoft - IDC**, Bangalore.
- *Field of exposure:* Recommender Systems, Cloud Services, Client-Server Models
- *Project:* Developed a model to provide case based recommendations of outgoing templates and brand specific text alternatives in communications on Azure and integrating it into the Dynamics 365 product

May-Jul 2016 **Research Intern**, **RISE Interactive Intelligence Laboratory- IIT**, Madras.
- *Guide:* Dr. Balaraman Ravindran
- *Field of exposure:* Data Mining, Machine Learning - Deep Neural Networks, NLP
- *Project:* Automated sequential labelling of remedial actions given customer complaints on a proprietary dataset through Data Mining and Deep Learning models

Open Source Contributions

Oct-Dec 2016 **TseriesMMA in R - Multiscale Multifractal Time Series Analysis**.
- Created and maintained an R Package for the same and contributed to the CRAN Project
- Link: https://cran.r-project.org/web/packages/TSeriesMMA/index.html

Skills

Languages C/C++ , Python, Java, C#, R, Android, Matlab, HTML, CSS, JS

ML Torch, Python Theano/SKLearn/Keras, Caffe, Tensorflow, Weka

NLP Python NLTK