MEHDI REZAEE

rezaee1@umbc.edu

Google Scholar

Homepage

INTERESTS

Machine Learning, Natural Language Processing, Variational Inference, Bayesian Networks

EDUCATION

Doctor of Philosophy in Electrical Engineering 2017-present
University of Maryland Baltimore County.
GPA: 3.75/4

Master of Science in Electrical Engineering 2014-2017
Sharif University of Technology (Tehran, Iran)
Thesis: Multi-Camera Action Recognition with Manifold Learning.

Bachelor of Science in Electrical Engineering 2010-2014
Isfahan University of Technology (Isfahan, Iran)

PUBLICATIONS

Discriminative and Generative Transformers For Situation Entity Classification. Arxiv
Mehdi Rezaee, Kasra Darvish, Gaoussou Youssouf Kebe and Francis Ferraro. *First Author*
We compare various generative and discriminative models for the situation entity classification and cover both low-label and plentiful annotated training regimes. We show that Transformers with latent variables can outperform the SOTA.

Event Representation with Sequential, Semi-Supervised Discrete Variables. NAACL 2021
Mehdi Rezaee and Francis Ferraro. *First Author*
The semi-supervision term is usually used in deterministic models but we use it for discrete latent variables with soft information injection without affecting the gradient flow. Our model not only outperforms multiple baselines and the SOTA in narrative script induction, but also converges more quickly.

A Discrete Variational Recurrent Topic Model without the Reparametrization Trick. NeurIPS 2020
Mehdi Rezaee and Francis Ferraro. *First Author*
We provide both experimental and analytical discussion about word-level topic modeling in conjunction with RNNs without marginalizing out the topics. We show improved perplexity and document understanding across multiple corpora.

A Survey on Compressive Sensing: Classical Results and Recent Advancements. JMM 2020
Seyedahmad Mousavi, Mehdi Rezaee and Ramin Ayanzadeh. *Second Author*
We overview classical tools and algorithms in compressive sensing and compare their performance in recovering text representation from their embeddings.

TALKS & PANELS

Annual Mid-Atlantic Student Colloquium on Speech, Language and Learning March 2020

- University of Maryland, College Park

PUBLIC SERVICE

Journal Reviewing
Elsevier Signal Processing 2020

Conference Reviewing
Automated Knowledge Base Construction (AKBC) 2021
International Joint Conferences on Artificial Intelligence (IJCAI-PRICAI) 2019
Empirical Methods in Natural Language Processing (EMNLP) 2019

HONOURS AND AWARDS

Ranked 24th of the country, in the M.Sc. Entrance Exam 2014

SKILLS AND INTERESTS

Programming Languages	Python, Matlab, C++
Tools, Libraries	PyTorch, Tensorflow
Operation Systems	Mac, Ubuntu

TEACHING EXPERIENCE

CMPE 306 (Introductory Circuit Theory) Spring and Fall 2017
- Taught by Dr. Yan and Dr. Carter (UMBC)

Signals and Systems Spring 2016
- Taught by Dr. Babaie-Zadeh (Sharif University of Technology)

Computer Vision in Multi-Camera Networks Spring 2015
- Taught by Dr. K. Aghajan (Sharif University of Technology)

Adaptive Filters Fall 2016
- Taught by Dr. Babaie-Zadeh (Sharif University of Technology)

RELEVANT GRADUATE COURSEWORK

UMBC:

CMSC 673 - Introduction To Natural Language Processing

ENEE 620 - Probability and Random Processes

ENEE 605 - Applied Linear Algebra

ENEE 621 - Detection and Estimation Theory

ENEE 718 - Topics in Signal Processing (Machine Learning)

Sharif University of Technology:

Statistical Learning

Computer Vision

Digital Image Processing

Adaptive Filters