

NAZANIN JAFARI

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RESEARCH INTERESTS

Natural Language Processing, Machine Learning, Information Retrieval

EDUCATION

Ph.D. in Computer Science *(Sept 2019 – Present)*

College of Information and Computer Sciences, University of Massachusetts Amherst, MA - USA

Center for Intelligent Information Retrieval (CIIR)

Supervisor: *Prof. James Allan* (GPA: 3.88/4)

M.Sc. in Computer Engineering *(Jan 2016 – Aug 2018)*

Computer Engineering Department, Bilkent University, Ankara - Turkey

Supervisor: *Prof. Cevdet Aykanat* (GPA: 3.43/4)

B.Sc. in Information Technology Engineering *(Sept 2011 – July 2015)*

Information Technology Department, University of Tabriz, Tabriz - Iran

Last two years GPA: 3.68/4

RESEARCH EXPERIENCE

UMass Amherst, MA, USA *(Sept 2020 – Present)*

My research focus is on developing novel deep learning based models for automatic fact checking, claim verification and fake news detection.

Supervisor: Prof. James Allan

UMass Amherst, MA, USA *(Sept 2019 – Jan 2020)*

Implemented a hierarchical data comparison platform using several hierarchical visualization tools and performed research on inferring best comparison techniques to visualize changes in hierarchical data.

Supervisor: Prof. Ali Sarvghad and Prof. Narges Mahyar

Bilkent University, Ankara, Turkey *(Jan 2016 – Aug 2018)*

Implemented a novel multilevel streaming graph partitioning scheme and applied parallel version of this scheme in OpenMP to boost the performance. The proposed framework, is on average 5.1x faster than its state-of-the-art counterpart.

Supervisor: Prof. Cevdet Aykanat

WORK EXPERIENCE

AuCoDe *(Jun 2021–Aug 2021)*

Data Science intern

Center for Data Science, UMass Amherst *(May 2020–Aug 2020)*

Data Science for Common Good fellow, in collaboration with AuCoDe Company

PUBLICATIONS

- **Nazanin Jafari**, Sheikh Mohammad Sarwar ,James Allan, Keen Sung, Shiri Dori-Hacohen, Matthew Rattigan “**CoMID: Zero-Shot COVID-19 Misinformation Alignment Detection Using Content and User Data**” Proceedings of the 17th International Conference on Web and Social Media. NEATCLaS (2023)
- **Nazanin Jafari**, Oguz Selvitopi, Cevdet Aykanat “**Fast shared-memory streaming multilevel graph partitioning**” Journal of Parallel and Distributed Computing (2020)
- Iman Deznabi, Mohammad Mobayen, **Nazanin Jafari**, O. Tastan, and E. Ayday. “**An Inference Attack on Genomic Data Using Kinship, Complex Correlations, and Phenotype Information.**” IEEE/ACM Transactions on Computational Biology and Bioinformatics (2017)

TEACHING EXPERIENCE

University of Massachusetts Amherst, Teaching Assistant (Fall 2019 – Spring 2022)

- Introduction to Programming with Python , Data Visualization and Analysis, Mathematical Foundation for Informatics

Bilkent University, Teaching Assistant (Spring 2016 – Spring 2018)

- Algorithms and Programming 1 , Algorithms and Programming 2

ACADEMIC SERVICES & ACHIEVEMENTS

- Peer Reviewer for Conference/Journal:
 - CIKM(2023)**
 - ACL(2023)**
 - CIKM(2022)**
 - WSDM(2021)**
 - DSAA(2020)**
- *Ranked second in B/S/H data mining contest in Turkey (Hackathon in Analytics for Production Excellence), Istanbul, Turkey.* (2017)
- *Ranked 3rd among students of Information Technology Department (class of 2015) based on semester GPA University of Tabriz, Iran.* (2015)

ACADEMIC PROJECTS

Hybrid Deep Learning based Sarcasm Detection on Reddit (Sept 2020 – Nov 2020)

- We generated a hybrid deep learning based model that incorporated user embedding, emotion and content in detecting sarcasm.

Classification of Fine Art Paintings with Convolutional Neural Networks (Sept 2019 – Dec 2019)

- We developed different CNN based models for art painting classifications and showed that fine-tuning first layers of a pre-trained CNN networks such as VGG-19 improves the performance of classification the most.

CERTIFICATES

Data Science for Common Good Summer program (Aug 2020)

- University of Massachusetts Amherst

TECHNICAL STRENGTHS

Programming Languages	Python, Javascript, Java, Matlab, R, C
Data Visualization	Tableau, D3
Frameworks	Hugging Face, Pytorch, TensorFlow, Keras, Scikit, NLTK, SpaCy
Database Management	Microsoft SQL, MySQL
Parallel Programming	MPI, OpenMP, CUDA