Omid Memarrast

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SUMMARY

Recent Ph.D. graduate in Machine Learning (ML) with a focus on Responsible AI and a strong background and experience in NLP, Computer Vision, and Generative AI. Published in prestigious conferences including ICML and AAAI, and backed by 2 years of valuable work experience and 2 successful internships.

EDUCATION

◇ **Ph.D. in Computer Science** Jan 2017-May 2023
▷ Computer Science Department, University of Illinois Chicago
▷ [PhD Thesis], GPA: 4/4, Adviser: **Brian Ziebart**

◇ **MS.c. in Computer Science** 2021
▷ Computer Science Department, University of Illinois at Chicago

◇ **B.Sc. in Software Engineering** 2008-2012
▷ Electrical and Computer Engineering Department, University of Tehran, Iran

RESEARCH INTERESTS

◇ Responsible AI, Fair ML, Generative AI, Recommender Systems
◇ Distributionally Robust ML, NLP, Computer Vision, Reinforcement Learning

WORKING EXPERIENCES

◇ **Machine Learning Research Intern** at **Linkedin**, Sunnyvale, CA
Summer 2020

▷ **Project: Fairness in a Two-Sided Marketplace**
▷ Developed an end-to-end pipeline ensuring fairness for both source and destination members in the ranking system of PYMK (People You May Know).
▷ Developed the framework at the scale using Apache Spark (Scala) and Hadoop. R programming language was used for the optimization. Mentor: **Kinjal Basu**
▷ keywords: Spark, Hadoop, Scala, R, Optimization, Fairness, Ranking

◇ **Data Science Intern** at **Morningstar Inc**, Chicago, IL
Summer 2018

▷ Built a document classification system using LSTM RNN neural networks.
▷ keywords: LSTM RNN, GRU, Glove Embedding, AWS, Keras, Scikit-learn, Numpy, Pandas

◇ **Software Engineer, Machine Learning** at **MITRC**, Tehran, Iran 2014 - 2016

▷ Built an information extraction system to extract existing relations from text using a bootstrap methodology by augmenting seeds, relations and patterns in the system.
▷ keywords: Git, IntellijIDEA, Maven, Scrum, Agile Methodologies, StanfordNLP, LingPipe, Information Extraction, Spark

TECHNICAL SKILLS

◇ Programming & Scripting: **Python**, C/C++, Java, Matlab, R, SQL, Scala
◇ Programming Environments: RStudio, Jupyter Notebook, IntellijIDEA, MySQL
◇ Frameworks: JIRA, AWS, A/B Testing, Hadoop, **Spark**, **Git**
◇ Libraries: **PyTorch**, Sk-learn, Numpy, Pandas, Matplotlib,**TensorFlow**, **Keras**

PUBLICATIONS

Superhuman Fairness [Paper][code] **ICML 2023**
Omid Memarrast, Linh Vu, Brian Ziebart
Also accepted in **ICLR 2023 Workshop: Trustworthy ML** [Paper]

Fairness for Robust Learning to Rank **PAKDD 2023**
Omid Memarrast, Ashkan Rezaei, Rizal Fathony, Brian Ziebart
[Paper][code] - - [`Acceptance rate` = 17%]
Also accepted in **NeurIPS 2021 Workshop: Algorithmic Fairness** [Poster]

Robust Fairness under Covariate Shift **AAAI 2021**
Ashkan Rezaei, Anqi Liu, **Omid Memarrast**, Brian Ziebart
[Paper][Code] - - [`Acceptance rate` = 21%]
Also accepted in **NeurIPS 2020 Workshop: Algorithmic Fairness** [Poster]

Fairness for Robust Log Loss Classification **AAAI 2020**
Ashkan Rezaei, Rizal Fathony, **Omid Memarrast**, Brian Ziebart
[Paper][code] - - [`Acceptance rate` = 20%]
Also accepted in **NeurIPS 2019 Workshop** on ML with Guarantees [Poster]

ParsiNLU: A Suite of Language Understanding Challenges for Persian **TACL 2021**
[Paper][code], Selected for presentation at **EMNLP 2021**
with **Daniel Khashabi** and others. Joint work with researchers from Google, Microsoft, etc.

SELECTED PROJECTS

- **Using Deep Convolutional Neural Networks to Recognize Museum Artwork Attributes**
  - [Report] [Slides]
- **Using Graphical Models for Inference in a Baysian Network**
  - Graphical models for inference [Code] [Report]
  - Inference with CRF + CNN uisng PyTorch [Code] [Report]
- **Twitter Sentiment Analysis using Machine Learning and Deep Learning Techniques**
  - [Code] [Report], Supervised by Prof. **Bing Liu**

AWARDS & HONORS

- Graduate Student Award Scholarship (5000 USD) at U of Illinois at Chicago. 2017
- Offered admission to M.Sc. program in Software Engineering 2012
  - At University of Tehran as talented undergraduate student.

SERVICES

Reviewer, **ICML 2022**
Reviewer, **NeurIPS 2021**, **NeurIPS 2022**, **NeurIPS 2023**
Program Committee, **IJCAI 2021**, **IJCAI 2022**

Program Committee for the **Student Research Workshop (SRW)** at:
ACL 2019, **ACL 2020**, **EACL 2021** & **NAACL 2021**
Volunteer at **AAAI 2020**

TEACHING EXPERIENCE

- **Teaching Assistant:**
  - **Computer Algorithms** 𝕀 Fall 2022
  - **Advanced Machine Learning** Spring 2022
  - Programming Practicum (C & C++) Spring 2017-Spring 2019, Summer 2022
  - Advanced Algorithm Design Fall-2014
  - Database Systems Fall-2013

REFERENCES

Brian Ziebart, Ph.D.
- Associate Professor, University of Illinois at Chicago. Email: `bziebart@uic.edu`

Xinhua Zhang, Ph.D.
- Associate Professor, University of Illinois at Chicago. Email: `zhangx@uic.edu`

Kinjal Basu, Ph.D.
- Senior Staff Software Engineer, LinkedIn AI. Email: `kbasu@linkedin.com`