

# Amin Hosseiny Marani

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## EDUCATION

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**Lehigh University, Bethlehem, PA** August 2018 - Present  
PhD, Computer Science GPA: 3.63/4  
Relevant Coursework: Advanced Programming, Social Computing, Data Mining, Machine Learning, NLP  
**Iran University of Science and Technology, Tehran, Iran** 2011 - 2014  
Master of Computer Engineering GPA: 15.13/20  
Relevant Coursework: Machine learning, Distributed AI, Neural Networks, Pattern Recognition  
**Shahid Chamran University, Ahvaz, Iran** 2007 - 2011  
Bachelor of Computer Engineering GPA: 14.53/20 (Top 5%)

## PUBLICATION

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**Hosseiny Marani, A.**, and Joshua Levine, Baumer, E.P.S (2021). More than Good and Bad: Human Assessments of Machine Labeling Quality Have Multiple Dimensions. Submitted to ACM Conference on Human Factors in Computing Systems (CHI).

Baumer, E.P.S. and **Hosseiny Marani, A.** (2020). Bias as a Distinct Factor in Human Ratings of Machine Labeling. in Human-Centered Approach to Fair Responsible AI at ACM Conference on Human Factors in Computing Systems (CHI), (Honolulu, HI).

## EXPERIENCE

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**Dana-Farber Cancer Institute | Harvard Medical School** Boston, MA  
*NLP Data Scientist (internship)* April 2021 - January 2022

- Developed a query-like text-to-table module to map clinical texts to time-table outputs using **deep learning** methods (e.g., BERT and Bi-LSTM)
- Improved Named Entity Recognition performance within **PyTorch** library using a new Loss function
- Improved Relation Extraction performance using **Knowledge Graph Neural Networks** and **BioBert**

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**DESIGN, ALGORITHMS, AND SOCIETY (DAS) LAB** Lehigh University, Bethlehem, PA  
*Graduate Research Assistant* 2018-present

- Extracted trends and topics of Covid-19 messages across social media and designed a predictive Covid-19 models using **topic modeling, linear regression, and model selection** tools.
- Designed a **CNN** to extract topics and connected to an **LSTM** to translate texts.
- Developed and analyzed a novel topic labeling and frame labeling **human assessment** method.
- Designed a novel **NLP human assessment** method and analyzed the assessment using **statistical analysis**
- Designed a **word embedding** based approach for **topic labeling**.
- Developed a new **interactive topic visualization method with R** to increase readability and stability.
- Improved Retinopathy classification using **CNN** and enhanced Retinal images using **GAN**.

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**Shahid Chamran University** Ahvaz, Iran  
*Teacher And Advisor* 2015-2017

- **Taught** 5 courses (Advanced Programming and Algorithms) and **advised** 5 undergraduate students.

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**Complex Systems Lab** Iran University of Science and Technology, Tehran, Iran  
*Graduate Research Assistant* 2010-2013

- Developed a Holonic Multi-Agent **recommender system** using **Map-Reduce** and **Sarl-Java**
- Designed a novel chaotic Boltzmann **neural network** to speed up the convergence.

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**Mobin Information Technology Research Center** Tehran, Iran  
*Java Developer* 2011-2012

- **Led** the localization of communication component of the **Java** Business Process Management (jBPM)

## SKILLS

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**Programming Languages:** (Proficient)R, Python, Matlab; (Familiar) C#, Java, C, C++  
**Frameworks and Tools:** Mallet, TensorFlow, PyTorch, Sk-Learn, Keras, Hadoop, Map-Reduce, Bert

## SERVICES AND ACTIVITIES

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<b>Reviewer</b> <i>Reviewer of an Elsevier journal in the field of neural networks and machine learning</i>	NeuroComputing Journal 2017-present
<b>Reviewer</b> <i>Reviewer of SAGE Journals in the field of topic modeling and social science</i>	SAGE Open 2021-present
<b>CSE Department Representative</b> <i>the Graduate Student Senate</i>	Lehigh University, Bethlehem, PA 2020-present
<b>Member of Upsilon Pi Epsilon society</b>	2021-present
<b>President of the Iranian Association at Lehigh University (LUISA)</b>	2021-present