

Sami Khenissi

PHD STUDENT · GRADUATE RESEARCH ASSISTANT

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Looking for a full time position after May 2022 as Machine Learning Engineer/ Research scientist

Summary

I am a **Ph.D. student** at the University of Louisville in Computer Science and Engineering, working at the Knowledge Discovery and Web Mining Lab and advised by Dr. Olfa Nasraoui. My research is centered around **Machine Learning**, more specifically I focus on **Recommender Systems** by studying common problems in state of the art systems.

Industry Experience

Bloomberg - AI

New York - USA / Remote

RESEARCH INTERN

May. 2021 - Aug. 2021

- Research internship with the AI-Recommendation team.
- Worked on Information Retrieval and NLP to improve Search results

Research Experience

University of Louisville

Louisville KY

RESEARCH ASSISTANT

April 2017 - Present

- Theoretical modeling of the feedback loop in Recommender Systems (**Paper Accepted in Recsys 2020**).
- Studying interpretability for deep learning architecture in Recommender Systems
- Modeling and Counteracting Exposure Bias in Matrix Factorization (**Received 1st place award at 2019 Speed Research Exposition Master Category**)
- Designing a new explainable Active Learning Strategy for Recommender Systems

Education

University of Louisville

Louisville KY

PH.D IN COMPUTER SCIENCE

Aug. 2019 - Present

- **Advised by Dr. Olfa Nasraoui**
- Awarded with the University Fellowship
- **GPA: 4.0**

University of Louisville

Louisville KY

M.Sc. IN COMPUTER SCIENCE

Jan. 2018 - May. 2019

- **Thesis:** Modeling and Counteracting Exposure Bias in Recommender Systems - **Advised by Dr. Olfa Nasraoui**
- **GPA: 4.0**

Publications

Debiased Explainable Pairwise Ranking from Implicit Feedback

Recsys 2021

KHALIL DAMAK, SAMI KHENISSI, OLFA NASRAOUI

Oct. 2021

In Fifteenth ACM Conference on Recommender Systems (RecSys '21),

Theoretical Modeling of the Iterative Properties of User Discovery in a Collaborative Filtering Recommender System

Recsys 2020

SAMI KHENISSI, MARIEM BOUJELBENE, OLFA NASRAOUI

Sep. 2020

In Fourteenth ACM Conference on Recommender Systems (RecSys '20),

Debiasing the Human-Recommender System Feedback Loop in Collaborative Filtering

HumBL@WWW2019

WENLONG SUN, SAMI KHENISSI, OLFA NASRAOUI

2019

In Companion Proceedings of the 2019 World Wide Web Conference (WWW '19 Companion)

Relevant Projects

Predict credit card Frauds using Anomaly Detection techniques (Kaggle competition – Silver Medal)

Kaggle

DATA SCIENCE AND MACHINE LEARNING

2019

- Final model included 9 different Tree based models that enabled us to secure a **top 5%** rank (190/6381) and a **Silver Medal**

Predict Estimated Repair Time for Power Outages for LG&E and KU Energy

LG&E

DATA SCIENCE AND MACHINE LEARNING

2019

- Designed a Data Science pipeline to predict the ETR (Estimated Repair Time) for different power outages

Implementing a MapReduce algorithm for a word counting algorithm using multiple AWS instances

University of Louisville

DISTRIBUTED SYSTEMS

2019

- Design **client server communication** using Go language
- Implement different steps of MapReduce for wordcount problem using Go hosted on **AWS** using multiple EC2 instances

Implementing and Online Recommender system based on MovieLens data and Explainable Matrix Factorization algorithm

University of Louisville

SOFTWARE ENGINEERING - MACHINE LEARNING

2019

- **Team Leader** of the Project (team of 5 students): Track progress and design next steps based on Agile process
- Using python, we designed a **web service** to provide explainable recommendation using **REST** architecture

Honors & Awards

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| 2019 | University of Louisville Doctoral Fellowship , University of Louisville | Louisville KY |
| 2019 | 1st Place at 2019 Speed Research Exposition Master Category , University of Louisville | Louisville KY |
| 2019 | Graduate Dean's Citation , University of Louisville | Louisville KY |
| 2019 | Highest cumulative scholastic standing in the departmental Master of Science program , University of Louisville | Louisville KY |
| 2014 | Tunisian excellence scholarship , Tunisian Government | Tunisia |

Invited Talks

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| 2020 | Understanding the Iterative Bias in Recommender Systems , Virtual Talk | Machine Learning
Tokyo Community |
| 2020 | Theoretical Modeling of the Iterative Properties of User Discovery in a Collaborative Filtering Recommender System , Virtual Talk | Recsys 2020 |
| 2019 | Modeling and Counteracting Exposure Bias In Recommender Systems , CSE Ph.D Seminar | University of
Louisville |

Skills

Machine Learning	Pytorch, Pytorch-Lightning, Tensorflow, Keras, scikit-learn
Programming	Python, R, Matlab, PHP, Go, Java, C++, C, Ruby, SQL, Git, Bash
Big Data	AWS, PySpark, Microsoft Azure, Slurm
Writing	Latex, Markdown (Typora)
Languages	English, French, Arabic

Volunteer Work

KDD 2021, IJCAI 2019

REVIEWER

Louisville KY

2019-Present

NSF Research Experience for Teachers in Big Data and Data Science at UofL

GRADUATE STUDENT MENTOR

Louisville KY

Summer. 2018 - Summer. 2019

Founder of the Data Science and Machine Learning Club

FOUNDER AND PRESIDENT

Tunis, Tunisia

2016 - 2017