MERYEM M'HAMDI

Applied NLP and ML Researcher for Driving Academic & Business Impact

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EXPERIENCE

Data & Applied Scientist II (Full-Time)
Bing Multimedia, Microsoft AI, Microsoft

📅 March 2024 - Present   📍 Redmond, WA, USA

- LLM-based evaluation for recommendation systems and ranking.

Data & Applied Scientist Ph.D. Intern
Bing Multimedia, WebXT, Microsoft

📅 May 2023 - Aug 2023   📍 Redmond, WA, USA

- Applied research on improving the Bing image ranker by proposing a deep-learning-based model to recommend candidate items to different users. Managers: **Shikhar Sharma** and **Andrew McNamara**.

Research Scientist Intern
NLP Group, Adobe Research

📅 May 2022 - Aug 2022   📍 San Jose, CA, USA

- Research on multilingual semantic search using meta-transfer learning and knowledge distillation. Mentors: **David Seunghyun Yoon**, **Trung Bui**, and **Franck Dernoncourt**.
- Published Patent **US20230297603A1**.

Research Assistant
Information Sciences Institute (ISI) - Uni of Southern California (USC)

📅 Jan 2019 – Present   📍 Marina Del Rey, CA, USA

- Research on cross-lingual transfer learning to downstream applications. Supervisor: Prof. **Jonathan May**.

Natural Language Processing (NLP) Research Intern
NLP Group, Adobe Research

📅 May 2020 - Nov 2020   📍 San Jose, CA, USA

- Research on cross-lingual natural language understanding and question answering using meta-transfer learning. Mentors: **Doo Soon Kim**, **Franck Dernoncourt**, and **Trung Bui**.

Data Science Intern Master Thesis Student
Swisscom AG, Ecole Polytechnique Fédérale de Lausanne (EPFL) Labs

📅 Feb 2018 – Sep 2018   📍 Lausanne, Vaud, Switzerland

- Creation of an end-to-end library for the performance evaluation of multilingual embeddings across text classification, unsupervised event detection, and churn detection. Manager: **Claudiu Musat**.

PROGRAMMING LANGUAGES & SKILLS

Python   Java   SQL   C++   Matlab   R   C#   Git

Natural Language Processing   Machine Learning   Data Mining

Deep Learning   Pytorch   Tensorflow   Transformers

EDUCATION

Ph.D. in Computer Science
USC, USA

📅 Jan 2019 – Jan 2024

- GPA: **3.92/4.0**.
- Thesis Title: Towards More Human-Like Cross-Lingual Transfer Learning
- Courses: Representation Learning, Natural Language Dialogue Systems, Representation Learning for NLP.

M.Sc. in Computer Science
EPFL, Switzerland

📅 Sep 2015 – Sep 2018

- Specialization: *Data Analytics*.

Honors B.Sc. in Computer Science
Al Akhawayn University in Ifrane, Morocco

📅 Aug 2011 – Jun 2015

- GPA: **3.91/4.0**.
- Minors: *Business Administration & Mathematics*.
- Tuition merit-based scholarship.
- Leadership Development Institute.
- Exchange program at GWU.

SELECTED PUBLICATIONS

- *M. M'hamdi*, J. May, F. Dernoncourt, T. Bui, and S. Yoon. **Multilingual Meta-Distillation Alignment for Semantic Retrieval.** Proc. SIGIR ACM 2024.

- *M. M'hamdi*, and J. May. **Leitner-Guided Memory Replay for Cross-lingual Continual Learning.** Proc. NAACL 2024.

- *M. M'hamdi*, X. Ren, and J. May. **Cross-Lingual Continual Learning.** Proc. ACL 2023.

- *M. M'hamdi*, D. S. Kim, F. Dernoncourt, T. Bui, X. Ren, and J. May. **X-METRA-ADA: Cross-lingual Meta-Transfer Learning Adaptation to Natural Language Understanding and Question Answering.** Proc. NAACL 2021.

- *M. M'hamdi*, M. Freedman and J. May. **Contextualized Cross-Lingual Event Trigger Extraction with Minimal Resources.** Proc. CONLL 2019.

RESEARCH PROJECTS

Cross-Lingual Information Extraction with Minimal Resources

NLP Group, ISI. PI: Marjorie Freedman, Elizabeth Boschee

📅 Jan 2019 - Present

- Generated a contextualized cross-lingual event extraction system using transfer learning with BERT.
- Achieved better performance in event trigger detection using a language-independent approach compared to linguistic baselines.

Analysis of the Impact of Linguistic Processing on Large Scale Semantic Similarity

Artificial Intelligence (AI) Lab, EPFL. Prof. Martin Rajman

📅 Feb 2017 – Jun 2017

- Implemented a clean, debuggable, and efficient NLP pipeline for linguistic pre-processing, including an FSA-based lexical analysis, a morphological analyzer using FST, and a syntactic analyzer using CYK.

Fine Grained Emotion Recognition in Human Dialogs using Hybrid Methodologies

Human Computer Interaction (HCI) Group, EPFL. Prof. Pearl Pu

📅 Aug 2016 – Jan 2017

- Implemented a hybrid fine-grained emotion recognition system using syntactic analysis, semantic similarity, semi-supervised machine learning with domain adaptation, and human validation.

Estimation and Visualization of Canton-Level Moods using Hybrid Fine-Grained Emotion Analysis Methodologies

Distributed Information Systems (DIS) Lab, EPFL. Dr. Michel Catasta

📅 Nov 2016 – Jan 2017

- Built a platform for analyzing 12 million geolocated tweets.
- Created a dynamic emotion visualization tool using the D3.js library.

SOCIAL VOLUNTEERING

Volunteer in social center for elderly people

Foundation Mohamed V for Solidarity

📅 Jun 2014 – Aug 2014

- Helping in day-to-day activities including feeding, nursing, entertainment, and psychological therapy.

Tutor and Mentor in an elementary public school

The George Washington Student Association

📅 Sep 2013 – Dec 2013

- Helping children with learning difficulties with their homework.

LANGUAGES

Moroccan Darija
Standard Arabic
English
French
Spanish

NOTABLE ACTIVITIES

Teaching Assistant
USC

📅 Aug 2020 - Dec 2020 & Aug 2023 - Present

- **Advanced NLP (CSCI-662)** (Prof. Jonathan May): Grading homework and projects, and holding office hours.
- **Data Structures & Object-Oriented Design (CSCI-104)** (Prof. Aaron Cote): Designing homework solutions, Piazza specialist, and holding office hours.

Peer-Reviewing
USC

📅 Apr 20 – Present

- ACL'24, NAACL'24, EMNLP'23, ACL'23, EMNLP'22, NAACL'22, EMNLP'21, ACL'21, AACL'20.

NL Seminar Organizer
ISI/USC

📅 Apr 2022 – Jan 2023

- Organizing seminars hosting top NLP researchers.

SoCalNLP19 Student Co-Chair
USC

📅 Jan 2019 – Sep 2019

- Co-organizing the 2nd Symposium in NLP and setting up a peer-review system.

AWARDS

- 2nd Best GPA in School of Science and Engineering, Class'15, Al Akhawayn University .
- 4 x President's List and 4 x Dean's List, Al Akhawayn University.
- Merit-based tuition scholarship, Al Akhawayn University.
- Regional merit-based scholarship for 1st best GPA in high school exam.

RECENT REFEREES

Prof. Jonathan May
@ ISI/USC
✉ jonmay@isi.edu

Shikhar Sharma
@ Microsoft
✉ Shikhar.Sharma@microsoft.com

Dr. Trung Bui
@ Adobe Research, San Jose
✉ bui@adobe.com

Dr. Claudiu Musat
@ Swisscom AG, EPFL Digital Lab
✉ Claudiu.Musat@swisscom.com