

MERYEM M'HAMDI

Natural Language Processing & Data Science Enthusiast

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EXPERIENCE

Research Assistant
Information Sciences Institute - University of Southern California
Jan 2019 – Present Marina Del Rey, USA

- Research on Natural Language Processing topics mainly cross-lingual event relation extraction and dialogue systems.

Data Science Intern Master Thesis Student
Swisscom AG, EPFL Digital Lab
Feb 2018 – Sep 2018 Lausanne, Switzerland

- Creation of end-to-end library for the performance evaluation of different multilingual and monolingual embeddings across different text neural classification architectures.
- Extending churn detection to more languages using multilingual embeddings.
- Proposing new framework for cross-lingual unsupervised event detection using multilingual embeddings.

Natural Language Processing Intern
Sony EuTEC, Speech and Sound Group
Aug 2017 – Jan 2018 Stuttgart, Germany

- Implementation and performance evaluation of CNN model using NNABLA for conversational intent prediction.
- Implementation and performance evaluation of Seq2Seq model based on RNN for jointly learning intent prediction and slot filling in conversational agents.

Software Engineering Intern
Swissquote
Jul 2016 – Sep 2016 Gland, Switzerland

- Working as part of an agile team on specification, backend/frontend development and maintenance of Java banking applications.
- Development of a web admin application to book operations on financial products including options and events.

SKILL SETS



EDUCATION

PhD in Computer Science
University of Southern California
Jan 2019 – Present

Research Interests: Natural Language Processing & Machine Learning & Deep Learning

M.Sc. in Computer Science
Ecole Polytechnique Fédérale de Lausanne
Sep 2015 – Sep 2018

Specialization: Data Analytics
Cummulative GPA: 5.29/6
Thesis title: "Creation and evaluation of multilingual embeddings for downstream semantic tasks"

Honors B.Sc. in Computer Science
Al Akhawayn University in Ifrane, Morocco
Aug 2011 – Jun 2015

Minor: Business Administration & Mathematics
Cummulative GPA: 3.91/4; Summa Cum Laude
Capstone Project: "A cloud-based solution for an e-health system adapted to Moroccan patients"

LANGUAGES

Arabic ●●●●●

English ●●●●●

French ●●●●●

Spanish ●●●●●

PROGRAMMING LANGUAGES

Java Python SQL C/C++ Scala
Matlab R C# GoLang HTML5
Javascript

RESEARCH PROJECTS

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

Artificial Intelligence Laboratory, EPFL

📅 Feb 2017 – Jun 2017

- Implementation of a clean, debuggable and efficient NLP pipeline for linguistic pre-processing:
 - FSA based lexical analysis.
 - Morphological analyzer using FST.
 - Syntactic analyzer using CYK.
- Semantic similarity computation using expectation minimization.

Fine Grained Emotion Recognition in Human Dialogs using Hybrid Methodologies

Human Computer Interaction Group, EPFL

📅 Aug 2016 – Jan 2016

- Implementing a hybrid fine-grained emotion recognition system using syntactic analysis and semantic similarity using Word2Vec and semi-supervised machine learning with domain adaptation.
- Design of a crowdsourcing experiment for the human validation of the emotion recognition methodology.

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

Distributed Information Systems Laboratory, EPFL

📅 Nov 2016 – Jan 2016

- Building a platform for analyzing 12M geolocated tweets.
- Creating interactive maps using D3.js library for visualizing distribution of emotions per canton and time interval.

Image Classification using Machine Learning Algorithms

Machine Learning and Optimization Laboratory, EPFL

📅 Sep 2015 – Jan 2015

- Extraction of image features using histogram of oriented gradients and convolutional neural networks trained on the ImageNet database.
- Training and evaluation of support vector machine, random forest and neural networks to recognize the object present in an image.

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.

EXTRACURRICULAR ACTIVITIES

Teaching Assistant

Ecole Polytechnique Fédérale de Lausanne

📅 Sep 2016 – Jun 2017

- **Software Engineering (CS-305):** Grading homework and exams and working as a coach assistant for teams developing Android applications.
- **Introduction to database systems (CS-322):** Providing recitation and lab assistance.

Student Ambassador

AI Akhawayn University Student Association

📅 Aug 2014 – Dec 2014

- Participating in the organization of activities to welcome newcomers and to ensure their smooth integration to university life.

REFEREES

Dr. Claudiu Musat

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Prof. Robert West

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Morocco

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