

# Bashar Talafha

PH.D. STUDENT

6201 Cecil Green Park Rd, Vancouver, BC V6T1Z1

☎ (+1) 604-834-1991 | ✉ bashartalafha@gmail.com | 🌐 bashar-talafha | 📄 ResearchGate | 📖 Google Scholar

## Summary

I am currently a PhD student in the School of Information at the University of British Columbia (UBC). I'm supervised by Dr. Muhammad Abdulmageed. My broad research interests are in Artificial Intelligence, Machine Learning, Deep Learning, Natural Language Processing, Sentiment and Social Media Analysis, Speech Technologies, and Multi-lingual/Multi-dialectal Information Processing. Previously, I earned a MSc and BSc degrees in Computer Science from Jordan University of Science and Technology. Before starting my PhD journey, I was a Sr. Data Scientist and NLU team leader in the Artificial Intelligence department at Mawdoo3 Ltd., Amman-Jordan. Before Mawdoo3, I was a Researcher and Machine Learning Engineer at Samsung Electronics, Amman-Jordan.

## Education

### UBC (University of British Columbia)

Vancouver, Canada

PH.D. IN INFORMATION STUDIES

2021 - Present

- Focus on Deep learning for Speech Processing

### JUST (Jordan University of Science and Technology)

Irbid, Jordan

MSC. IN COMPUTER SCIENCE

2014 - 2017

- Thesis title: Using Deep Neural Networks for Aspect-based Sentiment Analysis

### JUST (Jordan University of Science and Technology)

Irbid, Jordan

B.S. IN COMPUTER SCIENCE

2010 - 2014

- Graduation Project: AllSpeak (Speech2Speech translator, OCR, Text Translator, TTS)

## Work Experience

### Mawdoo3 Ltd.

Amman, Jordan

NLU TEAM LEADER

2019 - Present

- Developing a plan for the Banking Conversation Assistant project that covers the entire cycle of the project from defining the project scope, deliverables, risks, and dependencies, then maps out a path to complete the project successfully.

- |                                                                                                                                                                                                           |                                                                                                                                                                                                                     |                                                                                                                                               |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"><li>• Guide project execution (Agile)</li><li>• Risk and Quality Management</li><li>• Team Coaching</li><li>• Code Review</li><li>• Partnerships Establishing</li></ul> | <ul style="list-style-type: none"><li>• Ensure the business is prepared to adopt the change</li><li>• Candidates Interviewing</li><li>• Process Documentation</li><li>• Deliver based on requirements, on</li></ul> | <ul style="list-style-type: none"><li>time and on budget</li><li>• Manage and communicate changes by balancing project constraints.</li></ul> |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|

SR. DATA SCIENTIST

- Researching and innovating new Natural Language Processing (NLP) technologies based on machine learning and deep learning approaches for Arabic language.

- |                                                                                                                                                                  |                                                                                                                                                         |                                                                                                                              |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"><li>• Dialect Translation</li><li>• Emotion Detection</li><li>• Semantic Text Similarity</li><li>• Language Modeling</li></ul> | <ul style="list-style-type: none"><li>• Profanity Detection</li><li>• Dialect Detection</li><li>• Voice Cloning</li><li>• Multi-task learning</li></ul> | <ul style="list-style-type: none"><li>• Sentiment Analysis</li><li>• Service Classification</li><li>• Paraphrasing</li></ul> |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|

- Building different SOTA language models (ELMO, BERT, RoBERTa, etc.)
- Developing Docker images to support DevOps and Testing Teams in their pipelines.
- Writing and publishing research papers.
- Interviewing candidates.

## SAMSUNG

SOFTWARE ENGINEER / MACHINE LEARNING

Amman, Jordan

2016 - 2019

- Explore areas to apply machine learning and deep learning models
  - Machine Translation
  - Language Modeling
  - Transfer Learning
  - Sequence Classification
  - Sequence Labeling
- Apply different Word Embeddings techniques (GloVe, word2vec, fasttext, ElMo)
- Develop web crawlers and data preprocessing scripts.
- Building a Microservices platform that presents all our AI-based components under one umbrella.
- Writing two patents and two papers.
- Leading D2SLC team
  - Mentoring and training up juniors and new staff.
  - Arranging weekly team meetings, focusing on targets and achievements
  - Interviewing candidates
- Participating in giving lectures about Machine Learning and Data Science.

## Jordan University of Science and Technology

RESEARCH AND TEACHING ASSISTANT

Irbid, Jordan

2014 - 2016

- Natural Language Processing.
- Knowledge Engineering Using Ontologies.
- Developing web crawlers (from forums and Twitter)
- Developing an Annotation tool for sequence labeling tasks.

## MercyCorps (- NGOs Experience)

COMMUNITY LEADER IN MERCY CORPS' LEADERSHIP AND COMMUNITY DEVELOPMENT PROGRAM

Irbid, Jordan

2013 - 2014 & 2014 - 2016

## Smart Vision

SOFTWARE ENGINEER

Abu Dhabi, UAE

02/2014 - 09/2014

- Outsource in Abu Dhabi Department of Finance (DOF), controlling and supporting the Time Attendance System using ASP.NET, ORACLE and CRYSTAL REPORTS.

## Minerets Tech. (- Training stage)

SOFTWARE ENGINEER

Amman, Jordan

10/9/2013 - 10/12/2013

- In charge of converting the company's main product, a desktop-based route accounting system, into a rich Internet application (RIA) [Sencha Ext JS, JavaScript, CSS, C#, ASP.NET]

## Patents

### Method And Apparatus For Processing Language Based On Trained Network Model

US PATENT

USA

2020

- Application number: 15/929824

### Multilingual translation device and method

US PATENT

USA

2019

- Application number: 16390317

## Publications

### [Under Review] Bench-marking and Improving Arabic Automatic Image Captioning Through The Use of Multi-task Learning Paradigm

ARXIV PREPRINT

Virtual Event

2022

### Sarcasm Detection and Quantification in Arabic Tweets

IEEE 33RD INTERNATIONAL CONFERENCE ON TOOLS WITH ARTIFICIAL INTELLIGENCE (ICTAI)

Virtual Event

2021

## ALUE: Arabic Language Understanding Evaluation

PROCEEDINGS OF THE SIXTH ARABIC NATURAL LANGUAGE PROCESSING WORKSHOP (WANLP)

*Kyiv, Ukraine (Virtual)*

2021

## Multi-dialect arabic bert for country-level dialect identification

CONFERENCE: THE 28TH INTERNATIONAL CONFERENCE ON COMPUTATIONAL LINGUISTICS (COLING2020)

*Barcelona, Spain*

2020

## Unsupervised dialectal neural machine translation

JOURNAL: INFORMATION PROCESSING AND MANAGEMENT

2020

## Atar: attention-based LSTM for arabizi transliteration

JOURNAL: INTERNATIONAL JOURNAL OF ELECTRICAL AND COMPUTER ENGINEERING (IJECE)

2020

## Mawdoo3 AI at MADAR Shared Task: Arabic Tweet Dialect Identification

CONFERENCE: ASSOCIATION FOR COMPUTATIONAL LINGUISTICS (ACL 2019)

*Florence, Italy*

2019

## Team JUST at the MADAR Shared Task on Arabic Fine-Grained Dialect Identification

CONFERENCE: ASSOCIATION FOR COMPUTATIONAL LINGUISTICS (ACL 2019)

*Florence, Italy*

2019

## Mawdoo3 AI at MADAR Shared Task: Arabic Fine-Grained Dialect Identification with Ensemble Learning

CONFERENCE: ASSOCIATION FOR COMPUTATIONAL LINGUISTICS (ACL 2019)

*Florence, Italy*

2019

## Outperforming State-of-the-Art Systems for Aspect-Based Sentiment Analysis

CONFERENCE: IEEE/ACS 16TH INTERNATIONAL CONFERENCE ON COMPUTER SYSTEMS AND APPLICATIONS (AICCSA 2019)

*Florence, Italy*

2019

## JUST at imageclef 2019 visual question answering in the medical domain

CONFERENCE: CONFERENCE AND LABS OF THE EVALUATION FORUM (CLEF) 2019

*Lugano, Switzerland*

2019

## IoH-RCNN: Pursuing the Ingredients of Happiness using Recurrent Convolutional Neural Networks

CONFERENCE: AAAI 2019

*Hawaii, USA*

2019

## Using a Hierarchical Softmax Based on the Huffman Coding Tree for Authenticating Arabic Tweets

CONFERENCE: IEEE/ACS 16TH INTERNATIONAL CONFERENCE ON COMPUTER SYSTEMS AND APPLICATIONS (AICCSA 2019)

*Abu Dhabi, UAE*

2019

## JUST at VQA-Med: A VGG-Seq2Seq Model

CONFERENCE: CONFERENCE AND LABS OF THE EVALUATION FORUM (CLEF) 2018

*Avignon, France*

2018

## Using long short-term memory deep neural networks for aspect-based sentiment analysis of Arabic reviews

JOURNAL: INTERNATIONAL JOURNAL OF MACHINE LEARNING AND CYBERNETICS

2018

## Aspect-Based Sentiment Analysis of Arabic Laptop Reviews

CONFERENCE: THE INTERNATIONAL ARAB CONFERENCE ON INFORMATION TECHNOLOGY (ACIT) 2017

*Yasmine Hammamet, Tunisia*

2017

## An Enhanced Framework for Aspect-Based Sentiment Analysis of Hotels' Reviews: Arabic Reviews Case Study

CONFERENCE: INTERNATIONAL CONFERENCE FOR INTERNET TECHNOLOGY AND SECURED TRANSACTIONS (ICITST-2016)

*Barcelona, Spain*

2016

## Using Big Data Analytics For Authorship Authentication of Arabic Tweets

CONFERENCE: 2015 IEEE/ACM 8TH INTERNATIONAL CONFERENCE ON UTILITY AND CLOUD COMPUTING (UCC)

*Limassol, Cyprus*

2015

## A Hybrid Approach for Arabic Named Entity Disambiguation

CONFERENCE: 15TH INTERNATIONAL CONFERENCE ON KNOWLEDGE TECHNOLOGIES AND DATADRIVEN BUSINESS

Graz, Austria

2015

## Human Annotated Arabic Dataset of Book Reviews for Aspect Based Sentiment Analysis

CONFERENCE: 3RD INTERNATIONAL CONFERENCE ON FUTURE INTERNET OF THINGS AND CLOUD (FiCLOUD 2015)

Rome, Italy

2015

## Honors & Awards

---

2021	<b>Four Year Fellowships (4YF)</b> , UBC / Ph.D. Award / 2021-2025	Vancouver, Canada
2021	<b>International Tuition Award</b> , UBC / Ph.D. Award / 2021 - 2025	Vancouver, Canada
2021	<b>President's Academic Excellence Initiative PhD Award</b> , UBC / Ph.D. Award / 2021 - 2022	Vancouver, Canada
2021	<b>R Howard Webster Foundation Fellowship</b> , UBC / Ph.D. Award / 2021 - 2022	Vancouver, Canada
2020	<b>1st place in the NADI shared task 1</b> , Coling 2020	Barcelona, Spain
2019	<b>2nd place in the MADAR shared task 2</b> , ACL 2019	Florence, Italy
2019	<b>3rd place in the MADAR shared task 1</b> , ACL 2019	Florence, Italy
2019	<b>4th place in the CL-AFF shared task</b> , Affective Content Analysis workshop at AAAI 2019 conference.	Hawaii, USA
2018	<b>Distinguished Employee Award</b> , Samsung / Samsung Research and Development Institute (SRJO)	Amman, Jordan
2017	<b>Best Project Award</b> , Samsung / Samsung Research and Development Institute (SRJO)	Seoul, Korea
2013	<b>Best Graduation Project Award</b> , JUST / Faculty of Computer and Information Technology	Irbid, Jordan

## Certifications

---

### Deep Learning Specialization

COURSERA

- Sequence Models
- Convolutional Neural Networks
- Structuring Machine Learning Projects
- Improving Deep Neural Networks: Hyperparameter tuning, Regularization and Optimization
- Neural Networks and Deep Learning

### Machine Learning A-Z™: Hands-On Python & R In Data Science

UDEMY

## Skills

---

**Research Skills:** Academic writing using LATEX, research methodology, reviewing, recognising research problems, keeping up to date with the cutting edge and SOTA papers in the field.

**Machine Learning** - Tensorflow, PyTorch, Keras, Scikit-learn, R, Mahout, Weka, RapidMiner, Matlab,

**Programing Languages** - Python, JAVA, C/C++, C#

**Web** - HTML, Javascript, Flask, Django, Sencha EXTJS, PHP, ASP, CSS, Bootsrap, Wordpress

**Others** - GIT, Linux, Docker, OpenAPI, Jenkins, MySQL, SQLite, Oracle, Android, Windows Phone, Cross-platform, Adobe Flash, Adobe Dreamweaver, Adobe Photoshop, Adobe After Effects, Adobe Lightroom, Microsoft Office, Communication and Presentation skills

## References

---

References available upon request