

Fatima Alhaj

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Address: Amman, Shafa Badran, Marj AlFaras, Rafea Ebn Almoaala street

Education

Ph.D in Computer Science (2017-2022)

UNIVERSITY OF JORDAN
JORDAN, AMMAN
GPA: Excellent (3.79)

Thesis title:
Multilabel Classification for
Cognitive Distortion in Arabic
Textual Data Based on
Ensemble Learning

Supervisor:
Prof. Ahmad Sharieh

Co-supervisor:
Prof. Riad Jabri

Master Degree in Information Systems (2012-2014)

UNIVERSITY OF JORDAN
JORDAN, AMMAN
GPA: Excellent (3.81)

Thesis title:
A new Methodology for
Testability: Refactoring Object-
Oriented Systems

Supervisor:
Prof. Amjad Hudaib

Bachelor in Computer Science (2006-2010)

UNIVERSITY OF JORDAN
JORDAN, AMMAN
GPA: very good (3.59)

B.Sc graduation project:
A 3D learning application for
Children with Learning
Disabilities

Supervisors:
Miss. Rola Ismail Al-khalid
Miss. Lama Rajab Ahmad
Abdul-Majeed

Experience

- **Teaching assistant at The University of Jordan / King Abdullah II School of Information Technology (KASIT), Department of Computer Science (September, 2017- February, 2021).**
 - Conducted exam invigilation.
 - Created teaching materials.
 - Carried out assessments and performed administrative work (Fundamental of computer science).
 - Supervised practical labs (Data Structure).
 - Provided feedback on student progress reports.
 - Assisted in the development of new course material (Software Engineering).
 - Edited many scientific papers.
 - Delivered lectures in:
 - Artificial Intelligence.
 - Object Oriented 2 (Python).
 - Commended by 4 professors for research quality.
 - Graded student papers.
 - Provided data visualizations for many projects.
- **Video Content Creator at Dopamine Association for physiological health awareness (October,2020).**
[Created a series of 11 short videos explaining thinking patterns that hold distorted thinking.](#)

- **Data entry volunteer at the University of Jordan's main library (November, 2018- January, 2019).**

In order to help the enhancement and improvement process of the Library's database content, I took a position entering the data of previous researches and dissertations done at the University of Jordan.

- **Volunteer Tutor in iTeam Academy, KASIT (September, 2016-February, 2017).** volunteered for creating and approving the video materials for "iTeam Academy" which is an educational YouTube channel publishes technology and science courses.

- **Graphic Designer and director of the website content, Abk Al-Tasneem cosmetics (March, 2011-December, 2013).**

A part time employee, tasked to design the packaging component of the cosmetic products.

Research & Projects

- **(February,2021): Short text mining project, KASIT, Department of Computer Information Systems**
Implemented a topic modeling method to improve the detection of target classes from social media text using python.
- **(November, 2020 – April, 2021): Cognitive distortions in Arabic Tweets project, KASIT, Department of Computer Information Systems**
Performed data scientist tasks such as creating a dataset of tweets (crawling), as well as a classification model of which I supervised the annotation process of.
- **(January-April, 2019): Detecting drug-drug interaction project, KASIT, Department of Computer Information Systems**
Built an ontology using Protégé to detect drugs interactions based on drug's mechanism of action.
- **(March-August, 2018): Arabic Text Classification project, KASIT, Department of Computer Information Systems**
Implemented a deep learning concepts to develop a classification model that detect article genres using python libraries.
- **(September-December, 2017): Reconstructing shredded documents project, KASIT, Department of Computer science**
Design a strip matching algorithm to resemble edges of the strips, in order to reconstruct the original document based on image similarity evaluation.
- **(2013): A methodology to detect dyslexia disability, KASIT, Department of Computer Information Systems**
Developed a full model that detect one of the learning disabilities based on specific features using neural networks (a part of a machine learning course through Master degree).
- **(2010): A 3D learning application for Children with Learning Disabilities, KASIT, Department of Computer science**
Developed the application using the Spring game engine along with 3D max (as B.Sc graduation project).

Publications

- Alhaj, Fatima, Ali Mustafa Al-Haj, Ahmad Sharieh and Riad Jabri. "Improving Arabic Cognitive Distortion Classification in Twitter using BERTopic." International Journal of Advanced Computer Science and Applications (IJACSA), Vol. 13, No. 1, (854-860), 2022.
- Alhaj, Fatima, Ahmad Sharieh, and Azzam Sleit. "Reconstructing Colored Strip-Shredded Documents based on the Hungarians Algorithm." 2019 2nd International Conference on new Trends in Computing Sciences (ICTCS). IEEE, 2019.
- Alhaj, Fatima, et al. "Detecting DDI Using Ontology: Drug Mechanism of Action." 2019 IEEE Jordan International Joint Conference on Electrical Engineering and Information Technology (JEEIT). IEEE, 2019.
- Sundus, Katrina, Fatima Al-Haj, and Bassam Hammo. "A Deep Learning Approach for Arabic Text Classification." 2019 2nd International Conference on New Trends in Computing Sciences (ICTCS). IEEE, 2019.
- Hudaib, Amjad, and Fatima Alhaj. "Self-Organizing Maps for Agile Requirements Prioritization." 2019 2nd International Conference on new Trends in Computing Sciences (ICTCS). IEEE, 2019.

Training & Certificates

- A training course: "Use of Modern Teaching Methods and Educational Technology in Teaching and Learning for Practicing Academic Profession", The Center of Consultation and Training at The University of Jordan, April 19- April 23, 2022.
- Fine Tune BERT for Text Classification with TensorFlow and Tweet Emotion Recognition with TensorFlow, Coursera website (June 2020).
- Microsoft Certified: Azure Fundamentals M10979, Microsoft (April 2019).
- VideoScribe: Master Whiteboard Animation from Zero to Hero (Create Whiteboard Animation Explainer Videos), Udemy (August, 2017).
- Machine Learning Foundations: A Case Study Approach, University of Washington online course, Grade Achieved: 94.5% (Nov, 2015).
- 3D Max Advance, The internet and Computer club in University of Jordan, Perfect Internet and Computer Program (PICP), 2 February, 2010- 15 June, 2010.
- Adobe Illustrator CS2, The internet and Computer club in University of Jordan, Perfect Internet and Computer Program (PICP), 7 June, 2010- 18 June, 2010.
- Adobe Flash, The internet and Computer club in University of Jordan, Perfect Internet and Computer Program (PICP), 25 January, 2010- 7 February, 2010.

Conferences & Workshops

- The First Data Science workshop, The Data Science club at Prince Summaya University (October 4th and 5th, 2021).
- International Conference on New Trends in Computing Sciences ICTCS (Author and Presenter), Prince Summaya University (Oct, 2019).
- 19th UK Workshop on Computational Intelligence - Portsmouth, United Kingdom (online attendee). Detection of suicidal Twitter posts (4 Sep 2019 - 5 Sep 2019).
- The 9th International Conference on Information Technology JEEIT (Author and Presenter), AL-Zaytoonah University (July, 2019).

PROFESSIONAL AFFILIATIONS

Reviewer:

- International Journal of Advanced Computer Science and Applications (IJACSA)
- Arabian Journal for Science and Engineering (AJSE).
- Informatica, An international Journal of Computing and informatics.

Research Interests

- Natural Language Processing (NLP), Machine Learning (ML), Human-computer interaction (HCI), text mining, sentiment analysis and text analysis for psychology.
- Software Engineering.
- Ontologies creation and analysis.

Skills & Tools

Professional

Python
Java
Ontologies
Latex
Matlab
C#
Infographic
Protégé
MS Visio



Technical

Google colab
PyCharm
RapidMiner
Plotly
VedioScribe
3D Modeling
Data Analysis Tools
Audacity
Arabic/English Writing



Personal

Communication
Decision Making
Flexibility
Organization
Negotiation skills
Teamwork
Self-motivated
Time management
Research skills



REFERENCES Available on request.