

Ali Hamdi Fadel

SOFTWARE ENGINEER · PROBLEM SOLVER

Amman, Jordan

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Education

Jordan University of Science and Technology (JUST)

B.S. IN COMPUTER SCIENCE

- GPA: 3.86

Irbid, Jordan

Sep. 2015 - Jun. 2019

Work Experience

Amazon

SOFTWARE DEVELOPMENT ENGINEER

- Built language identification solution for Arabic and English search queries using techniques like **fastText** classification and regular expressions.
- Enhanced search system quality in Arabic by introducing new techniques that matches Arabic and English search queries using Deep Learning.
- Worked on developing Arabic and right-to-left (RTL) supported systems.

Amman, Jordan

Oct. 2019 - Present

Jordan University of Science and Technology

RESEARCH ASSISTANT

- Worked on natural language processing (NLP) tasks such as text classification, sequence labeling and neural machine translation (NMT).
- Participated in machine learning competitions such as NSURL Semantic Question Similarity in Arabic (**2nd/10**) and WANLP MADAR task (**4th/19**).
- Worked on projects to develop powerful machine learning models to solve Arabic NLP problems such as Arabic Text Diacritization, Arabic Sentiment Analysis, and Arabic Neural Machine Translation.

Irbid, Jordan

May. 2019 - Present

Samsung Research and Development

MACHINE LEARNING INTERN

- Worked on text classification problems using machine and deep learning techniques like **TF-IDF**, **SVMs**, **RNNs**, **CNNs**, and **Transformers**.
- Increased system accuracy by **3%** by proposing a new model architecture for Arabic dialects identification using RNNs and word embeddings.
- Worked on neural machine translation (NMT) using sequence-to-sequence (Seq2Seq) models such as RNN-based and Transformer-based.
- Evaluated different word embedding techniques such as Word2Vec and FastText, and visualize them using **t-SNE** dimensionality reduction algorithm.

Amman, Jordan

Feb. 2019 - May. 2019

Hsoub

FREELANCE TRAINER

- Recorded videos in three courses to explain how to use **Ruby on Rails** framework to build real life applications.
- The first course was about basics of Ruby on Rails and how to build a simple *Content Management System* (CMS) application.
- The second course was about using Ruby on Rails framework to build a forum like *HsoubIO*.
- The last course was scaling Ruby on Rails framework to build huge projects like *Twitter*.

Remote

Jul. 2017 - Feb. 2019

Publications

- “JUSTers at SemEval-2020 Task 4: Evaluating Transformer Models Against Commonsense Validation and Explanation”, SemEval 2020
- “MTRecS-DLT: Multi-Modal Transport Recommender System using Deep Learning and Tree Models”, SNAMS 2019
- “Neural Arabic Text Diacritization: State of the Art Results and a Novel Approach for Machine Translation”, WAT 2019
- “Pretrained ensemble learning for fine-grained propaganda detection”, NLP4IF 2019
- “Tha3aroon at NSURL-2019 Task 8: Semantic Question Similarity in Arabic”, NSURL 2019
- “Team JUST at the MADAR Shared Task on Arabic Fine-Grained Dialect Identification”, WANLP 2019
- “Arabic Text Diacritization Using Deep Neural Networks”, ICCAIS 2019

Skills

Programming Languages C/C++, Python, Ruby, JAVA and SQL

Machine Learning Linear and Logistic Regression, SVMs, Deep Neural Networks, MLPs, CNNs, RNNs, Transformers, TensorFlow and Keras

Web Programming HTML5, CSS3, JavaScript, Ruby on Rails, jQuery, JSON, Bootstrap and SASS

Databases PostgreSQL, MySQL, SQLite

Familiar with LaTeX, Git, GitHub, MVC, Problem Solving, Windows and Linux

Certifications

DeepLearning.ai

DEEP LEARNING SPECIALIZATION (LINK)

Jan. 2019

Stanford University

MACHINE LEARNING (LINK)

Aug. 2018

University of British Columbia

SYSTEMATIC PROGRAM DESIGN (LINK)

Feb. 2017

Harvard University

INTRO TO COMPUTER SCIENCE (LINK)

Jan. 2017

Honors & Awards

- Listed in Dean's Honor List 4 times.
- First place in Local Hack Day 2018 hackathon at Jordan site.
- Certifications at competitive programming competitions:
 - › Harvard University - CS50x Coding Contest: participated in 2017. Rank: **(1st/366)**.
 - › IEEEExtreme Competition: participated in [2016-2018]. Best Rank: **(37th/4026)** in 2018.
 - › Google Hash Code Competition: participated in 2018. Rank: **(924th/4852)**.
 - › International Collegiate Programming Contest (**ICPC**):
 - Arab Collegiate Programming Contest (**ACPC**): participated in [2017-2018]. Best Rank: **(32nd/107)** in 2017.
 - Jordanian Collegiate Programming Contest (**JCPC**): participated in [2016-2018]. Best Rank: **(3rd/86)** in 2017.
 - Arabella Collegiate Programming Contest (**ArabellaCPC**): participated in [2016-2019]. Best Rank: **(3rd/43)** in 2017.
 - Jordan University of Science and Technology Collegiate Programming Contest (**JUST-CPC**): participated in [2016-2019]. Best Rank: **(1st/7 'teams')** in 2017 and **(2nd/40 'students')** in 2017.
 - › Google Code Jam Competition: participated in 2017.
 - › Facebook Hacker Cup Competition: participated in 2017.

Projects

Shakkelha (Diacritize it)

PYTHON, FLASK, TENSORFLOW, KERAS (LINK)

2019

- Online Arabic text diacritizer was built based on the graduation project.
- Used **Flask** framework to deploy the **Keras** machine learning (ML) model to online server.
- This web application provides the first free-for-all **JSON** APIs that can be used to diacritize Arabic text.

KONTESTS (Contests)

RUBY, RUBY ON RAILS, HTML, CSS, JS, SCRAPING (LINK)

2018

- Web crawler that tracks the programming contests from **7** online judges and schedule them in one place.
- This application utilizes **cron** jobs on operating system level to allow the application to update its database periodically.

codeforces2pdf (Codeforces-to-PDF)

PYTHON, SELENIUM, SCRAPING (LINK)

2018

- Command-line tool that uses **Selenium** web driver to extract **CodeForces** online judge problems and contests into PDF files.

Ekhtsrni (Shorten me)

RUBY, RUBY ON RAILS, HTML, CSS, JS (LINK)

2016

- **URL shortener** service, provides features like URL password protection and URL Analysing.
- Simulates URL shortener services work flow while trying to provide more customized features.

Ruby3arabi (Ruby Arabi)

RUBY, RUBY ON RAILS, HTML, CSS, JS (LINK)

2015

- The first Arabic website that explains **Ruby** programming language and provides online interpreter to allow users to run their codes while learning.

Activities

- **Scratch** programming language, algorithms and encryption lecturer at **Hexa Connection** non-profit organisation.
- Judge and Problem Setter: AmmanCPC 2017 and AmmanCPC 2018.
- Problem Solving Volunteer Trainer [Feb. 2017 - Aug. 2018]: Trained Computer & Information Technology department students from Jordan University of Science and Technology (**JUST**) for **ICPC**. The training explains advanced topics in data-structures, algorithms and problem solving techniques like dynamic programming, segmented trees and graph theory.
- **Ruby** programming language and **Ruby on Rails** framework trainer for summer practical training at Jordan University of Science and Technology (**JUST**) [Aug. 2017].
- Volunteer at Innovation Programming Lab - Jordan University of Science and Technology (**JUST**): Training students and preparing C++ programming lab materials.
- Volunteer at Scout: Boy Scouts of Libya, Benghazi, Summer 2005 to 2015. Coordinated, mentored, trained and led several scout troops.
- Solved **1000+** problems at 14 different online judges websites.