

Ezz El Din Abdullah

ENGINEERING • SOFTWARE ENGINEER

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Education

B.S. in Electronics and Communication Engineering

AIN SHAMS UNIVERSITY

2013 - 2018

My graduation project was Optical Gas Analyzer and my role was to develop a machine learning algorithm to predict unknown concentrations of gas spectra.

Experience

Natural Language Processing Intern

Maadi, Cairo, Egypt

AIM TECHNOLOGIES

Jan 2020 - Present

- Data collection (from elasticsearch) and annotation and editing preprocessing pipeline.
- Adding spam detection classification to the Arabic model and API testing on more than 4 million records from social media.
- Hands-on experience with micro-service architecture (Docker), cloud infrastructure (Google Platform), and ML libraries (e.g., Scikit-Learn, FastText)

Private

EGYPTIAN ARMED FORCES

Oct 2018 - Dec 2019

A mandatory military service after graduation.

Data Scientist Intern

6th October, Egypt

OPTOMATICA

Jul 2018 - Sep 2018

Developed algorithms using Python and Julia and applied ML models e.g. SVM, linear and logistic regression, random forests after feature engineering and data cleansing.

Programming and Mathematics Tutor

Cairo, Egypt

FREELANCE

Apr 2014 - Aug 2018

- Mentored master's degree students with numerical computing using MATLAB.
- Tutored statistics and data analysis using MATLAB and python in college.
- Helped engineering students refine linear algebra and foundations of mathematics using MATLAB

Competitive Programmer

Online

HACKERRANK

Oct 2018 - Present

Two gold badges in Python and SQL.

Programming Instructor

Online

UDEMY

Aug 2018 - Sep 2018

Created a paid SQL practical [course](#) "Intuitive SQL Case Study" based on my article "SQL Case Study – Helping a Startup CEO Manage His Data" which was published in [KDnuggets](#) and republished in [experfy](#).

Image Processing Intern

Sheraton, Cairo, Egypt

SI-WARE SYSTEMS

Jan 2017 - Mar 2017

- An exceptional winter internship in image processing for Optical MEMS (Micro-electromechanical system).
- Developed a graphical user interface to detect flatness and roughness of micro-optical bench.

Research and Signal Processing Intern

LLOC LAB FOR LASERS AND OPTICAL COMMUNICATIONS

Faculty of Engineering, ASU

Aug 2016 - Sep 2016, Jul 2017 - Sep 2017

- Awarded a training certificate for completing the optical MEMS workshops and research experience for the longest period among my junior mates.
- Coded an autoregressive model for super-resolving ideal FTIR (Fourier transform infrared) spectra using MATLAB.

Projects

Personal

CLASSICLE ([github link](#))

Jan 2020

- Deployed an open source project, on a server using django framework, in NLP to classify 5 topics of paragraphs whether they are related to business, entertainment, politics, sport, or technology.
- Developed a deep learning model using Bidirectional LSTM with evaluation of 85.5% accuracy and 87% F1-score.
- Utilized unit testing to validate my model in python and cared about production and speed for the User Interface at the hosting HTML page flavored with CSS when the client clicks on the button.

Graduation Project

SPECTRA CONCENTRATIONS PREDICTION

Jun 2018

- Predicted unknown concentrations of gas spectra with accuracy 98% using principle component regression (PCR) which is a machine learning algorithm combining principle component analysis (PCA) with multiple linear regression (MLR).
- Validated my prediction algorithm on ideal data with accuracy 98% and around 90% on measured data.
- Tested the algorithm on mixture of gases to predict each unknown concentration of the required spectrum in the mixture with average accuracy of 90%.
- Performed serial communication between MATLAB and Arduino to be able to talk to each other; this way would make the user able to measure the concentration interactively through Arduino and array of LEDs.

Technical Skills

Machine Learning • Deploying ML Models • NLP • Docker • Vim • Python • Tensorflow • Keras • Tensorflow.js • Scikit-Learn • LSTM • RNN • CNN • R • Julia • MATLAB • SQL • Deep Learning • Statistics • Linux • Signal and Image Processing • Time Series • Numerical Computing • Git/Github.

Extracurricular Activity

Cofounder & Vice President

Faculty of Engineering, ASU

PI STUDENT ACTIVITY

Oct 2014 - Sep 2016

- Formed the scientific community focusing on concepts with an insight into practical ideas and building network.
- Led the team of prototyping; the geeks who did experiments in the scientific exhibition called 'Insight' to raise awareness about history of science and new ideas of technology.