



education

m.sc | computer engineering **Nile University | 2018-Present**

- Research: machine learning applications in wireless technology
- GPA: 3.97

bs.c | eece engineering **Cairo University | 2017**

- Concentration in programming, software engineering, electronics and telecommunications.
- Graduated with high distinction.
- GPA: 3.20

coursework (msc, bsc)

computation

machine learning

computer vision

deep learning

stanford's cs231 (directed)

data structures

data mining

big data

software dev.

computer architecture & os

rtos

embedded linux

avr embedded programming

stat/math

probability

statistics

optimization

linear algebra

info theory

linear models

stochastic processes

estimation and detection

mathematical modeling

multivariate calculus

discrete mathematics

differential equations

engineering

fundamentals of networking

communication systems I, II & III

computer control systems I & II

electronics I, II & III

electromagnetic waves I & II

papers / posters

published / accepted

- "Towards Intelligent Web Context-Based Content on-Demand Extraction Using Deep Learning" accepted at 2020 IEEE GCAIoT, published at IEEE Xplore

experience

mcit aws practical data scientist academy | trainee

fall 2021 - spring 2022

- aws services data analysis and machine learning certification training.

andalusia group for medical services | data scientist

winter 2020 - present

- hypothesize, investigate and explore solutions for medical data.
- worked on a melanoma skin anomaly detection project.
- developed a high accuracy social media reputation analysis system.
- developed high accuracy sentiment analysis and topic modeling systems for several Arabic dialects.
- designed a tool used for analyzing ads efficiency based object detection.
- worked on an insurance claims reduction project.

epita school of engineering and cs, france | trainee

fall 2020

- participated in epita's teachers training program, serving their partnership with the Egyptian government's AI program.

nile university, winc center | reseach assistant

fall 2018 - fall 2020

- investigating methods to interpret deep learning models.
- developed an algorithm for a data fetching model .
- developed a statistical method to learn from either small or large data source.
- stream processing on edge for IoT data science.

brainwise | ml / dl developer

fall 2018

- a part time deep learning and computer vision developer.
- developed a movement recognition pose system.
- worked on recommendation system project.

national instruments | labview software intern

summer 2014

- received labview core-1 training on software development.
- examined the labview hardware interface with CompactRIO

teaching experience

national instruments - cu program | labview moderator

summer 2014 - spring 2017

- moderated sessions for labview programming to ni program in cairo university.
- fundamentals mentoring and technical support.



skills

languages

programming

c++ • c • java • labview

scripting

python • matlab • shell bash • vhdl

javascript • r

machine learning

modeling frameworks

pytorch • tensorflow • scikit-learn

keras • gensim • fasttext

processing

numpy • pandas • matplotlib • seaborn

scipy • opencv • nltk

algorithms

cnn • lstm • rnn • gans

data science

frameworks

pyspark • hadoop • hive

spark-sql • flink

embedded systems

architectures

pic • avr • arduino • raspberry pi

tools

embedded c • rtos • avr assembly

embedded linux

general

languages

english • french • arabic

software

proteus • multisim • cadence

modelsim • \LaTeX • microsoft office

os

linux • windows

ides

jupyter • spyder • eclipse • vim

vs-code • octave

personal

self-motivated • cooperative

team worker • problem solver

self-learning enthusiastic • good

communication / presentation skills

contact info

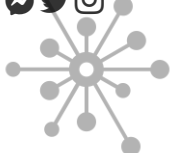
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work emails:



projects

- google api dependent object recognition and money detection android application (bsc project), python, matlab, java, frameworks: tensorflow, keras, android studio and opencv
- human movement recognition using pose estimation, (python), frameworks: sklearn, keras and opencv
- fast news topic classification using headlines, (python), using sklearn, pytorch, glove and word2vec embeddings
- fast action recognition system on video, (python) pytorch, keras, opencv
- arabic fonts classification system - image classification, (matlab, python keras)
- temperature and motion monitoring system, (embedded c, labview) for avr architecture
- arabic topic detection, (python keras)
- twitter stream processing using flink java

hands on skills

machine learning

- machine learning modules for regression, supervised and unsupervised learning.
- dl applications; use of cnn, rnn, lstm..etc architectures in computer vision and nlp.
- cv; semantic and instance segmentation, using generative models and detection using yolo model. nlp; (english - arabic) processing, sequence modeling, sentiment analysis, topic modeling and word2vec generation. image and video captioning.

embedded systems

- embedded systems fundamentals using microcontrollers and peripherals.
- work with can, lin, spi, i2c and uart communication protocols.
- istqb knowledge and software testing concepts.
- linux kernel configuration, patching device drivers and cross compilation.
- work with linux auto build systems like crosstool-ng and yocto project.

online courses / certificates

hackerrank

- problem solving (basic) • python (intermediate)
- C++ (basic) • C (basic) • python (basic)

coursera

- introduction to IoT and embedded systems • intro to matlab
- machine learning by stanford • neural nets and deep learning
- improving deep neural nets • CNNs • sequence models (RNNs)
- development of real-time systems (using FreeRTOS, simso)

sololearn

- data science with python • c++ tutorial • java tutorial
- python3 tutorial • html fundamentals • sql fundamentals

udemy

- the numpy stack in python • intro to sql

other

- istqb foundation • effective test case and bug report writing techniques

volunteer work

church educational services for kids
national instruments student ambassador
blackhorse, academic member
gate, organizing committee member

2011-present
2014-2017
2014-2016
2015