mina melek

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MinaMelek
Kaggle

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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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 leaning
- 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	2011-present
national instruments student ambassador	2014-2017
blackhorse, academic member	2014-2016
gate, organizing committee member	2015