

ZEINAB MOHAMED

@ zeinabmohammed817@gmail.com
+201128890330

ZaynabMohammed
Helwan, Cairo, Egypt

zeinab-mohamed

EDUCATION

Bachelor's degree in Electrical, Electronics and Communication Engineering.

Cairo University **Grade: Very good**

graduation year: 2021

GRADUATION PROJECT

Oct.2020 - July.2021

Under supervision of Dr/.Mohamed Khairy, and mentored by Smartec-Group.

Capacity Optimization for cellular network in (3G, 4G) using Machine Learning Algorithms

Description:

The objective in this project is to develop a method to detect the problems of cellular network in (3G, 4G) like [the overshooting, the high utilization, the blocking in (UL, DL), low average quality, high service drop rate, overload congestion in (cell, RNC), high CCE-usage] by monitoring the values of **HUAWEI Vendor Counters** using data analysis concepts with python for KPIs analysis and Machine Learning [Sklearn, Matplotlib, Mpl-toolkits, Pandas, Numpy]. Then recommend solutions for each of these problems to increase capacity of 4G and 3G cellular networks.

Grade:

Excellent.

OTHER PROJECTS

Communications Based Projects

- MATLAB simulation of OFDM system, 2020.
- MATLAB simulation of channel support **DAMPS** and **AMPS** to compute the blocking probability, 2020.
- MATLAB simulation for different digital modulation techniques (BPSK, QPSK, 16-QAM, 16-ASK), 2020.
- LTE Planning containing Coverage dimensioning and Capacity dimensioning using ATOLL, 2020.
- MATLAB simulation of a super-heterodyne receiver, 2019.

Programming Based Projects

- Python, Model (Bert) a real-time streaming sentiment analysis using Spark for English comments in Twitter including keywords, 2021.
- Python, Train Convolutional Neural Networks (Face Recognition), Recurrent Neural Networks and improving their Hyperparameter Tuning, 2020.
- C++ Program that implements a simple version of in-order delivery packets in many networking protocols and applications using Circular Buffer, 2019.

Electronics Based Projects

- Universal Biquadratic Active Filter and design an Opamp-RC Band-pass Filter simulation on Cadence Virtuoso, 2019.
- Simple Arithmetic Logic Unit (ALU) IC's based and implemented on PCB, 2018.

INTERNSHIPS

Trainee at Mega Academy|Aug-Sep 2020.

- GSM, GPRS, EDGE, CDMA, UMTS, HSPA, LTE and LTE-A.
- Drive Test and LTE planning (Atoll).

Trainee at KMT for industrial services|July 2019.

- programmable logic controller.
- Integrated condition monitoring.

IT Engineer Trainee at E-GAS Company|Aug 2018.

- Concept of Network and Types of them.
- Communication protocols in Network and protocol layers (OSI).
- Internet application protocols.

TECHNICAL SKILLS

- Machine learning frameworks like Keras, Pytorch, Tensorflow and Sklearn.
- Data science and Data analysis.
- Data structures, algorithms and OOP.
- Full Mobile Package.
- LTE air interface Huawei training.
- Cellular Network Optimization & improvement.
- Drive test result analysis & Planning with Atoll.
- 5G Huawei training.
- CCNA 200-301 training.

PROGRAMMING

C++/C python SQL

TOOLS

Anaconda Visual Studio Excel Atoll
Multisim Protcus Cadence

VISUALIZATION, ANALYSIS

MATLAB Matplotlib Mpl-toolkits
Pandas Numpy Tableau

PERSONAL SKILLS

Hard-working Self motivated Self learner
Working under stress Strong team player

LANGUAGES

Arabic: Native.

English: Very good.