Ahmad Mahmod

Date of birth: 31 Oct 1996 | **Nationality:** Syrian | **Gender:** Male | **Phone number:** (+33) 744900404 (Mobile) | **Email address:** ahmad.nawras.mahmod@gmail.com | **Email address:** mahmod@unistra.fr | **Website:** https://ahmahmod.github.io/ | **LinkedIn:** https://www.linkedin.com/in/ahmadnawrasmahmod/ | **GitHub:** https://github.com/ahmahmod |

Address: 67000, STRASBOURG, France (Home)

WORK EXPERIENCE

1 JAN 2017 – 1 JUL 2021 Latakia, Syria

LECTURER BIT INSTITUTE

Teaching multiple subjects:

- Cellular Systems
- Computer Networks and Protocols
- Networks programming using Python

1 JAN 2019 – 1 JAN 2021 Latakia, Syria

TELECOMMUNICATIONS WORKSHOPS TRAINER SKILLS AND CAREER CENTER - TISHREEN UNIVERSITY

Workshops in:

- Programming Languages (Python and MATLAB)
- Networks Programming using Python (design sockets TCP and UDP, SDN controllers, mininet)
- Telecommunication Systems Simulations using MATLAB (channels, coding, modulation, MIMO)

EDUCATION AND TRAINING

NOV 2023 – CURRENT STRASBOURG, France

PHD IN SOFTWARE DEFINED LOW-POWER AND LOSSY WIRELESS NETWORKS Strasbourg University - ICube Lab

Website https://icube.unistra.fr

1 OCT 2021 – 17 OCT 2023 Cosenza, Italy

MSC IN TELECOMMUNICATION ENGINEERING: SMART SENSING, COMPUTING AND NETWORKING University of Calabria

Website https://www.unical.it

15 JUN 2014 – 1 JUL 2019 Latakia, Syria

BSC IN TELECOMMUNICATION AND ELECTRONICS ENGINEERING Tishreen University

Website http://www.tishreen.edu.sy/ | **Field of study** Information and Communication Technologies |

Final grade 93.00%, The best graduates score of the university | **National classification** 1 |

Thesis Millimeter Waves (mmWs) Channel Simulation using MATALAB

GOOGLE IT AUTOMATION WITH PYTHON PROFESSIONAL CERTIFICATE Coursera

Automate tasks by writing Python scripts, Manage IT resources at scale, both for physical machines and virtual machines in the cloud, Use Git and GitHub for version control, Analyze real-world IT problems and implement the appropriate strategies to solve those problems

Website coursera.org/verify/specialization/ML8UVBHY8NGK

DEEP LEARNING Coursera - DeepLearning.AI

Describe the Build and train deep neural networks, identify key architecture parameters, implement vectorized neural networks and deep learning to applicationssubjects or topics that you learnt.
Build a CNN and apply it to detection and recognition tasks, use neural style transfer to generate art, and apply algorithms to image and video data.
Build and train RNNs, work with NLP and Word Embeddings, and use HuggingFace tokenizers and transformer models to perform NER and Question Answering.

Website coursera.org/verify/specialization/77KSYSNUTB7V

MACHINE LEARNING Stanford Online

It provides a broad introduction to modern machine learning, including supervised learning (multiple linear regression, logistic regression, neural networks, and decision trees), unsupervised learning (clustering, dimensionality reduction, recommender systems, Reinforcement Learning), and some of the best practices used in Silicon Valley for artificial intelligence and machine learning innovation (evaluating and tuning models, taking a data-centric approach to improving performance, and more).

Website https://coursera.org/share/5c64be77f12186471f5b87a1289707d7

LANGUAGE SKILLS

Mother tongue(s): **ARABIC**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C1	C2	B2	B2	C2
ITALIAN	A2	A2	A2	A2	A2
FRENCH	A2	A2	A2	A2	A2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

DIGITAL SKILLS

Programming Languages

Python | C/C++ | MATLAB | Java

Networking

TCP/IP | OSI model | CCNA | Routing and Switching | Networks Protcols

IoT

Wireless Sensor Networks | RIOT Operating System | IoT protcol stack

Deep Learning and Neural Networks

TensorFlow | Keras | Matplotlip | Numpy | PyTorch | CNN and RNN | Scikit-Learn | OpenCV | Pandas

Cellular Systems

Mobile Radio Networks: GSM, UMTS, LTE, 5G NR | Multiple Access | Wireless Channel

Wireless Protocols

IEEE 802.15.4 | Bluetooth (Classic and BLE) | WiFi | ZWave | RFID

Android and Android Studio

Software Defined Networks (SDN)

Opendaylight Controller | Ryu Controller | POX Controller | Mininet | Open vSwitch | OpenFlow Protocol | Mininet Wifi | SUMO Mobility Simulator

Federated Learning

Flower Framework

Containerization

Kubernetes | Docker | Namespaces

PUBLICATIONS

2024
SDN-Assisted Client Selection to Enhance the Quality of Federated Learning Processes

IEEE Wireless Communications and Networking Conference (WCNC)

2024
Menu or a la carte? An architecture for programming the data plane of constrained wireless networks

CoRes Conference

2023
Improving the quality of Federated Learning processes via Software Defined Networking

NetAISys '23: Proceedings of the 1st International Workshop on Networked AI Systems - Article No: 6

PROJECTS

1 MAY 2022 – CURRENT
Improving the Quality of Federated Learning by leveraging SDN

The is the most recent project I still working on.
Objective: Exploit the characterstics of **SDN networks** to enhance the QoS of the Federated Learning applications depending on the networking concepts such as *delay* and *routing.* The project is serveing under what called *'Networking for AI'.*
Results: One paper has been sent for reviewing (*not published yet*) and further developing on the mechanism is applied in order to publish further papers.
Skills: GNS3, OpenDayLihgt Controller, Open V Switches, VMware, Virtual Box, OpenFlow and Python.

1 JAN 2023 – 5 APR 2023
RSNA Screening Mammography Breast Cancer Detection

Objective: The objective of this project was to develop a convolutional neural network (CNN) model to identify cases of breast cancer in mammograms from screening exams.
Results: The CNN model achieved an accuracy of 99% on the test set. This is a competitive accuracy compared to other methods for breast cancer identification in mammograms.
Skills: Machine learning, Deep learning, Computer vision, Image processing, Python, TensorFlow and Kaggle

1 DEC 2022 – 15 MAR 2023
Contradictory, My Dear Watson: Detecting contradiction and entailment in multilingual text

Objective: The objective of this project was to develop a model to classify pairs of sentences as entailment, neutral, or contradiction.
Results: The RoBERTa model achieved an accuracy of 82% on the test set. This is a very good accuracy compared to other methods in the same competetion.
Skills: Machine learning, Natural language processing, Deep learning, Python, TensorFlow, Hugging Face and Kaggle

1 MAR 2022 – 1 AUG 2022

Skin Deases Detector App

Objective: Provides an instant service to detect the skin diseases that the patient suffer from.
Methods: It uses CNN network (MobileNet V2) modified using “transfer learning” to detect the disease that is intergrated then in the Android app using TensorFlow Lite 'TFLite'.
Results: The application enable the user to upload or take a photo directly for the skin surface of the injury. Multiple services after the detection has been implemented: a general view of the diagnosed disease, the best medicine for the diagnosed diseases, Send Email or an SMS to the doctor of the patient.
Skills: Android Studio, Java, TFLite, Deep Leaning, CNN.

Link https://drive.google.com/file/d/1yPSsJovcg17lLq_AP-t9CcFd3zGRAm87/view?usp=sharing

1 JUL 2018 – 1 JUL 2019

Millimeter Waves (mmWs) Telecommunications Channel Simulation (BSc Thesis)

Objective: The main idea was about developing a model for Millimeter Waves (mmW) used in 5G.
Methods: Starting from a real data obtained using **NYUSIM** that is use real values measured in specific scenarios then, we developed a model in MATLAB that represent this channel.
Results: The developed model can be used then for channe-performance evaluation tasks like **Bit Error Rate (BER)** and **Signal to Nosie Ratio (SNR)** and **Channel Capacity** as shown in the final results that used Alamouti Coding to achieve both Time and Space Diversity.
Skills: Wireless Channel, Millimeter Waves, MATLAB, MIMO.

HONOURS AND AWARDS

2023

Excellent Prize for First Graduate – University of Calabria

Final GPA: 110 (with honor) / 110

2022

Excellent Prize for First Ranked Student – University of Calabria

Accumulative GPA: 30/30

2020

Al-Basel Certificate for First Graduate – Tishreen University

The most important academic excellence certificate in Syria for Graduates. Final GPA: 93%.

Al-Basel Certificate for the Distinguished in Academic Study (First, Second, Third and Fourth Year) – Tishreen University

2015, 2016, 2017, 2018.
The most important academic excellence certificate in Syria.

VOLUNTEERING

1 JAN 2019 – 1 JAN 2021 Tishreen University, Skills and Career Center, Latakia, Syria

Trainer

Volunteer trainer for two years in Programming and Networks Programming using Python and Telecommunication Systems Simulations using MATLAB.