Nicole Berbery

Biomedical Engineer

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Kfaraakka El Koura, North Lebanon

PROFESSIONAL EXPERIENCE

Postgraduate Researcher   October 2019 June 2021

Lebanese International University   Tripoli, Lebanon

- Worked on MRI data collection, classified into four types: the Mild Demented, Very Mild Demented, Moderate Demented and Non-Demented under the supervision of Dr Lara Hamawy.
- Selected the ResNet 50 Network as the best Network for obtaining higher Accuracy and Precision than other Networks for analyzing MRI Data.
- Conducted the study using the Python Software to analyze the result; having the MRI data images as INPUT and obtained the ROC CURVE, the Precision, the Accuracy, the Area under Curve, and F1_Score as OUTPUTS.

Undergraduate Researcher   October 2016 June 2019

Lebanese International University   Tripoli, Lebanon

- Worked on identifying some Sleep Disorders such as Narcolepsy, Insomnia, and Restless Leg Movement under the supervision of Dr Ahmad Diab.
- Monitored the Sleep Stages of a human being while he is falling asleep at Night.
- Completed the project using specific electronic tools: Passive Infrared Sensor (PIR), Barometric Air Pressure, and Real Time Clock (RTC).
- Used the Arduino Uno microcontroller board, which is based on the Microchip AT mega 328P microcontroller.

Private Tutor   Oct 2016 – 2020

Freelance   Kfaraakka, Lebanon

- Provided English and science lessons to several students from grades 5 to 11 on a daily basis.
- Developed a curriculum based on student individual needs targeting different educational objectives by setting short and long term goals for each student.
- Assessed student's level of English proficiency through different mediums (activities, conversational skills, writing, reading, test taking).

Intern   August 2019-November 2019

Internship at Al Koura and Notre Dame Maritime Hospitals
- Trained on the use of the medical imaging devices such as Ultrasound, magnetic resonance imaging (MRI), fluoroscopy, echography, radiography and positron emission tomography (PET).
- Researched on MRI, Centrifugation Machine, Sterilization, Bone Densitometry, and Lithotripsy…and developed presentation on these machines.

EDUCATION

Masters of Science in Electronic Engineering, Biomedical with distinction   **spring 2021**
Lebanese International University   Tripoli, Lebanon
Thesis: Brain age Detection using artificial intelligence based on MRI images, using the python Software program

Bachelor of Science in Electronic Engineering-Emphasis on Biomedical   **spring 2019**
Lebanese International University   Tripoli, Lebanon
Thesis: Sleep quality monitor using the Arduino Uno microcontroller and specific electronic tools

SkILLS

Languages
- **Arabic:** Native Speaker
- **English:** Fluent
- **French:** Proficient

Computer & Software
- Python, Java, C++, Mat lab, AutoCAD, Microsoft Office ® (Word, Excel and PowerPoint)

Webinars Attended
- "Why Biomedical Engineering?   **April 8, 2021**
- "Reverse Engineering Neural Control of Behavior in Hydra"   **March 29,2021**
- "Network Imaging: A New Window into the Human Brain Functions and Diseases"   **March 26, 2021**

Volunteering Activities
- Assisted for the project "Citizen Training and Showcase" of the Lebanese Center for Civic Education Civitas Lebanon.   **March 9, 2014**
- Achieved the "Injaz Lebanon Leadership Program".   **July 8, 2012**
- Accepted and enrolled into the English Access Micro scholarship Program of the embassy of the United States of America in Beirut for 3 years.   **June 23, 2012**
- Held a volunteer position with the embassy of the United States of America to clean Section 10 of the Lebanon Mountain Trail in celebration of the United States Independence Day.   **2012**