Ali Mustapha

PhD, Computer & Telecommunication

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PROFESSIONAL EXPERIENCE

TÉLÉCOM PARIS, POLYTECHNIC INSTITUTE OF PARIS, Palaiseau, France

MACHINE LEARNING ENGINEER   **October 2022 - December 2023**

- Enhanced the previous name-based gender detection and the name-based geographic origin detection systems, through extensive unbiased dataset collection, augmentation, and CNN model's parameters fine-tuning.
- Applied both models at the very large scale of the Software Heritage archive (more than 200 million FOSS projects).
- Deployed models on Hugging Face. This enabled data mining from user-provided links of repositories (GitHub, GitLab, etc.) .
- **[Link to the Prototype (HuggingFace)](#)**

Research Assistant   **April 2022 - October 2022**

- Developed a GAN model for generating challenging-to-detect DDoS traffic and assessed its performance against DL-Based IDS.
- Integrated generated and original data, augmenting DL-Based IDS (LSTM) for improved detection of the synthetic data.
- Implemented the model atop a network monitoring tool to parallelize the monitoring and packet analysis processes .
- **[Link to the code](#)**

AMERICAN UNIVERSITY OF BEIRUT (AUB), LEBANON

Research Assistant   **September 2021 - February 2022**

- Researched biases in medical image deep learning models, particularly those related to race.
- Utilized diverse datasets incorporating race and pathology features for comprehensive model training
- Trained and validated Densnet101 model on MRI images, addressing biases through targeted experimentation and cross-testing on different racial datasets.
- **[Link to the code](#)**

PUBLICATIONS

- Detecting DDoS Attacks Using Adversarial Neural Network Mustapha, A. et al., Computers & Security 127 (2023)
- Automatic Classifications Between Covid19 Pneumonia, Lung Cancer and Healthy Lung tissue on Chest CT Scans, International Conference on Advances in Biomedical Engineering (ICABME) 2021.

EDUCATION

PHD, UNIVERSITY OF STRASBOURG, THE ICUBE LAB   **Strasbourg, France**

Inter-domain Monitoring and Predictions for Service Orchestration in 5G   **2024 - Present**

TOPIC: SLA; SUPERVISION; AGGREGATION; PREDICTION; REINFORCEMENT LEARNING

IUL UNIVERSITY   **Saida, Lebanon**

Computer and Telecommunications Engineering Degree (Bac+5)   **2017 - 2022**

Relevant Coursework: Data Analysis, Data science Software Engineering; Operating Systems; Algorithms; Artificial Intelligence; Wireless Technologies; Network Architecture.

AWARDS & CERTIFICATIONS

- First place in the Lebanon IoT & AI challenge 2022.
- Second place in the IEEE Lebanon Biomedical Student Competition LBSC 2021.
- CCNA: Introduction to Networks
- CCNA: Switching, Routing, and Wireless Essentials

SKILLS

- **Programming languages:** Python, Java, C, SQL.
- **Frameworks and modeling tools:** Tensorflow, Pytorch, Docker, PySpark, Pandas, SciKit- Learn, Seaborn, Scapy, Git, MongoDB.

LANGUAGES

English: Full professional proficiency | **French:** Professional proficiency