Khalil THABET

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ACADEMIC QUALIFICATIONS

Computer Science Engineering's Degree
Tunis, Tunisia
September 2020 - September 2023
National School of Computer Sciences - Manouba

Undergraduate Studies in Mathematics and Physics
Tunis, Tunisia
September 2018 - September 2020
Faculty of Mathematical Physical and Natural Sciences Of Tunis

Baccalaureate Degree In Mathematics
From 2014-2018
In 2018 with 'Good average' grade

COMPUTER AND LANGUAGE SKILLS

	Beginner	Intermediate	Advanced
Development	Bash, Flask, VHDL, STM32, FPGA	Android, Java, CUDA C++, C, Javascript, ReactJs	Assembly, QT, Python
Scientific Computing	OPENCV	Tensor Flow	
Network		Packet Tracer, Wireshark	
Modeling	Method B, BPMN	UML	
Methodology	2TUP, SCRUM	Waterfall, V-Shape Model	
DMBS	OracleDB	MySQL, MongoDB	
Languages	German		French, English, Arabic

PROFESSIONAL EXPERIENCE

GPU Implementation of Spike neural Network using CUDA
School Lab
June - August 2022 (2 months)
- Study of the GPU architecture and familiarization with the **CUDA ToolKit** and **Jetson Nano TX2**.
- Development of an N-dimensional Array library with **C++** with the different types of algebraic operations.
- Optimizing different algorithms present inside **Pytorch Library** for n dimensional computations.
- Developed and executed test plans and analyzed test results with **GoogleTest** Library and **CMAKE** platform.
- Optimized training up to **60% less time** for more than **1000 pixel images width**.

Spike Neural Network Based Face Recognition
School Lab
February - April 2022 (3 months)
- Research on the different techniques used up to day for face detection and face recognition.
- Review of the existing solutions using SNN and extracting comparative tables.
- Created a Face Recognition Model with SNN using **Pytorch** with **62,91% accuracy.**
- Built integral Data Preprocessing Pipeline for converting input data into time varying sequence.
- Developed a Detector Model using **OPENCV and Tensorflow**.

PROJECTS

Medical Practice Project
From April 2019 - May 2019
- Built a CLI to manage and monitor resources in a medical practice using **Python** to interact with the operating system.

Belote Card Game project
From March 2021 - May 2021
- Development of a multiplayer card game using object-oriented programming and integration of a graphical user interface with **Qt** and **C++** to facilitate the use of the application.

Web Application For The Management Of a Driving School
From August 2021 - September 2021
- Created with **ReactJS** and **MongoDB** to manage and record resource activities through an admin interface, including HR, accounting and financial management, enabling users to access an interactive interface to review their tasks and progress.

Algorithm visualizer
From March 2022 - September 2022
- Developing Pathfinder and sorting Algorithm Visualizer based on multiple algorithms using **ReactJS** to visualize the process of the algorithm.

Drone Simulation using neural network Genetic algorithms
- Designed and Implemented a simulator for a 2D-QuadCopter for moving to desired target using **Pygame and NEAT-Python**.

COMMUNITY LIFE & ACHIEVEMENTS

ENSI Junior Entreprise
- Active Member from 2020 to 2021
- President from August 2021 to October 2021

Junior Entreprise Of Tunisia
Jan 2021 - Mar 2021
- Organization committee of the JTED : Junior Tri-Hybrid Evolution days.

Competitive Programming Club
October 2020 - Currently
- Active Member
- TCPC Finalist 2022

Tunisian Finals Of Microsoft's Imagine cup 2017
- Reaching local Finals with the project of an entertainment adventure game quest (Mobile app) inspired from the new solar system discovered by NASA,Trappist-1. The app was developed using **BotFramework** and **Android Studio** then deployed on **Microsoft Azure**.

Codingame
- Ranked 6700th - MAD POD RACING Challenge - Gold League
- Ranked 2804th - Spring Challenge 2021 - Silver League

CERTIFICATIONS

- Fundamentals of Accelerated Computing with CUDA Python(Nvidia)
- Using Python to Interact with the Operating System - (Coursera)
- Python Classes and Inheritance -University of Michigan (Coursera)
- Neural Networks and Deep Learning - DeepLearningAI (Coursera)
- Parallel Programming in Java - Rice University (Coursera)
- Introduction to git and github - (Coursera)

HOBBIES

- Running
- Reading Books
- Writing Articles
- Solving Coding Problems