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
Network		PacketTracer,Wireshark	
Modeling	Method B, BPMN	UML	
Tools		Docker, TensorFlow, Kubernetes, OPENCV	
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**
  MyWeb
  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 images more than 1000 pixel images width.

- **Spike Neural Network Based Face Recognition**
  MyWeb
  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