

Mostafa Sayed Besar

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20 Atfa Elbahrawy Alhussien Cairo, Egypt

Software Engineer

EDUCATION

Bachelor of Engineering in Computer and Automatic Control-Tanta University 2017.

Military Service Status: Completed (April/2018-October/2020).

Birth Date: 21-September-1994

IEEE Member Since 2015.

SUMMARY

I am a growth-oriented software developer, familiar with problem solving - C/C++ - Python - JavaScript, Nodejs, MySQL, I have practical knowledge in general layered architecture and software design based on requirements. I am proficient in C. I Supervised teams in the embedded systems track at Tanta University. Searching and reading documentations is one of my best skills.

EMPLOYMENT

Egyptian Armed Forces | December/2018 - October/2020

Fiber Network Engineer (Reserved Officer)

- Maintenance and Troubleshooting of connectivity problems.
- Resolve hardware and software issues in a timely manner.
- Handling network equipment like fiber based switches.
- Repaired many faults and configured Optical fiber Cabinets (UMUX1500, Milegate).
- Taking response about network problems and resolving related issues.
- Finding the cable cut using OTDR, Source Meter, Power Meter and Visual Fault Locator.
- Finding buried underground cables using RD8000.

INNOTECH | Winter 2016 (3 Months)

Embedded Hardware Training

- Design and synthesis 8 bit processor using VHDL.
- Controlling a led over the internet using Raspberry Pi.

COURSES

- Advanced C programming ([Udemy](#) Certification).
- Mastering 4 critical skills using C++ ([Udemy](#)).
- Embedded SW Architecture ([Amr Ali - Youtube](#)).
- JavaScript Programming ([KMR Script](#)).
- Nodejs Development ([KMR Script](#)).
- Embedded Systems Programming on ARM Cortex Processor ([Udemy](#) Certification).
- Master Microcontroller and Embedded Driver Development 1 ([Udemy](#) Certification).
- Master Microcontroller: Timer-PWM-CAN-RTC-Low power 2([Udemy](#) Certification).
- Mastering RTOS: Hands on FreeRTOS and stm32fx with debugging ([Udemy](#) Certification).
- Intro to Automotive Functional Safety (ISO26262) ([Udemy](#) Certification).
- Software Development Processes and Methodologies ([Coursera](#) Certification).

TECHNICAL SKILLS

- C/C++
- Data Structures and Algorithms
- OOP
- Python
- Software Development Life Cycle
- Linux Administration
- Nodejs
- Database
- ARM Cortex-M3/M4 Architecture
- JavaScript

- Familiar with different Microcontrollers such: STM32 - AVR - PIC.
- Microcontroller - Peripherals such: GPIO - Timers - PWM - PLL - WFE/WFI - Low Power Modes - RTC.
- Microcontroller - Interfacing such: ZigBee - Ultrasonic - Gas Sensor - Temperature Sensor - DC Motor - Servo Motor - Keypad.
- In-Vehicle Communications (CAN).
- Serial Communication (SPI - I2C - UART).

TOOLS

- STM32CubeIDE - Atmel Studio - Code blocks
- Keil - CCS - Visual Studio Code
- Git
- FreeRTOS - SEGGER Systemview
- Doxygen
- Saleae Logic Analyzer

PROJECTS

Practical Experiment for Fixed Point Math vs Float Point Math

Tools/Technology :STM32CubeIDE, STM32F446RE MCU, Embedded C.

So I tested the difference between execution time of Fixed Point Math and Float Point Math on STM32F446RE (FPU disabled).

STM32 FreeRTOS Queue Processing

Tools/Technologies :STM32CubeIDE, Tera Term, STM32F446RE MCU, FreeRTOS.

The project executes some commands entered by the user through UART Peripheral and queuing commands into Queue then replying to the user.

Air Pollution Monitoring [Graduation Project]

Tools/Technologies: ZigBee, Embedded C/C++, Node.js, IoT, WSN, GSM module, Atmega32 Microcontroller.

The Project is based on Wireless Sensor Network Technology which aims for collecting data of pollution from (Clients) nodes for the desired region then sending data to the web server through HTTP protocol from the Gateway(Master) Node which contains GSM module.

Smart Manipulator Arm

Tools/Technologies: ANFIS Technique, Matlab, Peter Corke Toolbox, Arduino.

The main purpose of this project is to drive robot inverse kinematics equations using intelligent approaches adopted from AI called ANFIS. It's a robot system that picks and places objects, it detects them using vision based control.

AWARDS AND ACCOMPLISHMENTS

- Team Supervisor (Embedded Systems track) at IEEE Tanta Student Branch Competition [November 2019 - May 2020].
- Second prize in IbTIECar2017 Competition regarding my Graduation Project [November 2017].
- Graduation project in Air Pollution Monitoring using Wireless Sensor Network technique [June 2017].
- Exhibited at Egyptian Engineering Day Exhibition 2016.
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- Participated in IEEEExtreme Programming Competition 9.0 through LCW'15 [October 2015].
- Participated in TIEC Capacity Building Training (InnovEgypt) [June 2015].

LANGUAGES

Arabic : Native English : Very Good