

# Zyad Ahmed Mackawy

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GitHub | <https://github.com/98zam98/>

## Education

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Faculty of Engineering | Tanta University

Sep 2016 - June 2021

- **Major** : B.E in Computer Engineering and Automatic Control
- **Minor**: Electrical Engineering
- **Coursework** : Data Structures & Algorithms , Operating Systems, Image processing , Computer Vision , Databases , Software Architecture, Math (1 , 2 , 3), Computer Graphics, Distributed Systems, Computer Networks, Circuits, Login Design, Electronics, Computer Architecture, Signals & systems, Fuzzy Control

## Skills

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**Proficient:** C\C++, problem solving, Arduino C, python, Algorithms & data structures, opengl, neural networks, tensorflow, Django, flask, html, css, js, jQuery, sass & scss,

good knowledge with AVR (atmega328p on Arduino board using winavr) , on the github you may find MCAL and HAL drivers

And currently developing ARM (stm32f10 blue pill) MCAL drivers, already did rcc, gpio, nvic, exti, and systick on my github, didn't start HAL layer drivers yet

Basic knowledge about embedded linux, raspberry pi and automotive, database, mongoDB, angular, react

**Familiar:** electronics, C#, version control systems, SDLC, Agile, SOLID principles, Design Patterns,

## AVR MCAL and HAL software Projects

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### Controlling 7 Segment with USART

[https://github.com/98zam98/USART\\_7seg](https://github.com/98zam98/USART_7seg)

### Keypad with USART

<https://github.com/98zam98/keypad-with-usart>

### Drivers

#### USART "serial communication protocol"

[https://github.com/98zam98/usart\\_driver](https://github.com/98zam98/usart_driver)

#### 7 Segment "displays numbers"

[https://github.com/98zam98/7\\_segment\\_driver](https://github.com/98zam98/7_segment_driver)

#### LCD "basic 16x2 character display"

[https://github.com/98zam98/lcd\\_driver](https://github.com/98zam98/lcd_driver)

#### Debounce "solves bounce problem, where one press sends several signals"

[https://github.com/98zam98/debounce\\_driver](https://github.com/98zam98/debounce_driver)