Abdelrhman Abdelaziz

Electrical Engineering student
www.linkedin.com/in/abdelrhman-abdelaziz-
abdelrhmanabdelaziz5@gmail.com / +36203872370 / Kunigunda Street 25,
Budapest.

Summary

A twenty-two years old Engineer can work with a minimal supervision.

Passionate, proactive and mission-driven second-year electrical engineering student at the University of Obuda, with high enthusiasm to learn and develop new skills in embedded systems environment.

Education

Electrical Engineering
Obuda University (2020-2024)

- My accumulative GPA is 4.27, and last semester my GPA was 4.63
  and ranked first between my classmates

Online Boot camps & courses

Embedded systems 3-months online Boot camp using AVR microcontroller (Jan 2021 – Apr 2021)

I had an embedded systems Boot camp which was given by a Siemens Senior Embedded Software Engineer, Egypt.

- C programming, Embedded C, Computer Architecture concepts
- Interfacing with 8-bit Microcontroller and implementing various applications and I wrote the all drivers by myself
(LCD, EEPROM, KEYPAD, SEVEN SEGEMENT, TIMERS (normal mode, CTC, PWM, frequency generator, input capture), Watchdog Timer, ADC

- Knowledge of communications protocols (UART, SPI, I2C), and used them to implement based on Microcontroller-based projects using Atmega32

- Familiarity with Real-time operating systems concepts (FREERTOS)
(OS VS RTOS, Multi-Tasking, Kernel, non-preemptive kernels, preemptive kernels, Threads, Idle Task & Starvation, Scheduler VS Dispatcher, Scheduling Algorithms, Round Robin Scheduling, Shared resources, Semaphores, Mutex, Deadlock,

Embedded systems one-month online Boot camp using ARM microcontroller (Jun 2021 – Jul 2021)

- It also was given by a Siemens Senior Embedded Software Engineer, Egypt.

1) Introduction to ARM processors.
- ARMv7 architecture.
- ARM Cortex different types Architecture, Cortex M4 architecture.
- ARM vs Thumb instructions.
- ARM Cortex-M4 instruction Set Architecture (ISA)
- ARM Cortex M4 Different Memory Regions.

- Cortex-M4 Main Components: (FPU, MPU, NVIC, SYSTICK)

2) Interfacing with TM4C123GH6PM Launchpad

- TM4C123GH6PM main components.

- Debugging technique (breakpoint, memory, registers, assembly code).

- Implement drivers for (SYSTICK timer, Digital I/O, External Interrupts, Analog to Digital converter (ADC), Pulse width modulation (PWM) module, General-Purpose Timers Module (GPTM), Communication protocol (I2C – SPI - UART))

3) Introduction to CAN module.

Embedded systems online Boot camp using ARM microcontrollers (Jul 2021 – Jul 2022) (one-year)

- It is taught by S2S Automotive solutions Technical leader Siemens, Egypt

- Quick revision in C language
- Advanced topics in Embedded C and learning how to write (Startup.s, Startup.c for Cortex–M , Linker script, Makefile)
  for Tiva C, STM32F1, STM32F4
- using the ARM IDEs (Keil, STM32 CUBE, PROTEUS)
- Writing different drivers for Tiva C, STM32F1, STM32F4 using IDEs and without using any IDEs
- Debugging Knowledge (famous JTAG/SWD), (ST-LINK, J-LINK, LAUTERBACH / TRACE32)
  (RENESAS E1/E2 Debugger)
- Microcontroller Architecture for ARM, AVR
- Interfacing with different Microcontrollers (STM32F1, STM32F4 , Tiva c , Atmega 32)

--- until now I finished here ---

- Data structures and Embedded systems architecting (UML) , MISRA-C
- communications protocols (UART, SPI, I2C, CAN, LIN)
- AUTOSAR
- ADAPTIVE AUTOSAR
- Embedded Linux

Skills

- C, Embedded C	- GIT (VCS)	
- Time management skills	- Communication skills	- Creativity

Languages

- Arabic (mother tongue)	- English (fluent)	- Hungarian (A2)