Ahmed Shebl Mohamed

Cairo, Egypt | ahmedshebl1616@gmail.com | +201122697299 |

linkedin.com/in/ahmed-shebl-0914691a3/ |Military Status: Completed

EDUCATION

Cairo University |Faculty of Engineering | Department of Electronics and Communications **[2022]**

- **Accumulative Grade:** Very Good with honors, percentage = 80.56 %
- **Graduation Project: Smart Virtual Traffic System** **[2022]**
  - Collaborated effectively within a team of 5 engineers to conceive and implement a cutting-edge traffic management system.
  - Developed and applied intelligent algorithms on a server to control the status of traffic lights, with real-time updates transmitted and displayed in each vehicle.
  - **Technologies and tools**
  - Raspberry Pi 3 Model B
  - GPS Neo 6M
  - USB Modem
  - Capacitive Touch Screen
  - **Graduation Project Grade:** Excellent

SKILLS

Programming Languages:
- C
- C++
- Java
- HTML
- CSS
- SQL

Microcontrollers:
- STM32 (ARM Cortex M3)
- ATMEGA16 (AVR)
- Arduino

Communication Protocols:
- UART
- SPI
- I2C

Embedded Systems:
- Embedded System Concepts
- Debugging Skills
- Good knowledge of Bootloader

Tools:
- Eclipse
- VS Code
- Proteus

Automotive Communication Protocols:
- CAN
- CANFD
- LIN
- Ethernet

Diagnostics and Communication Standards:
- Diagnostics and UDS

RTOS and Embedded Systems:
- OSEK
- FreeRTOS

Automotive Software Frameworks:
- Introduction to AUTOSAR

COURSES

- **C++ Object Oriented Programming and Algorithms**
- **Java Core + Rest API**
- **Full Stack Web Development with ReactJS and Spring boot**

➢ **Projects:**

- **React Counter Application**
  - Created a simple React application to demonstrate fundamental concepts such as state management, event handling, and component interaction.
  - Developed features including increment, decrement, and reset functionality for a counter using React class components and state management.
- **Full Stack Todo Application**
  - Developed a full stack application using React for the frontend and spring boot for the back end.
  - Integrated Restful APIs with JPA/Hibernate for database interaction.

▪ Embedded Systems Diploma

➢ **Projects:**

- **Stopwatch (AVR Based)**
  - Designed an advanced stopwatch using AVR microcontroller ATmega16.
  - Defined features such as automatic counting, reset, pause, and resume functionality.
- **Calculator (AVR Based)**
  - Introduced a calculator with user-friendly features allowing seamless numeric input and result display on an LCD screen.
  - Incorporated a keypad interface with integrated essential arithmetic operations.
- **Temperature–Controlled Fan System (AVR Based)**
  - Engineered fan control utilizing ATmega16 microcontroller.
  - Employed timer interrupts to generate PWM signals, enabling precise control of fan speeds.
  - Implemented temperature–dependent logic, where fan speed gradually increases with temperature and developed a real-time display on LCD, showcasing current temperature and fan status.
- **Precision Distance Measurement System (AVR Based)**
  - Established a distance measurement system using ATmega16 microcontroller.
  - Integrated an ultrasonic sensor to accurately measure distances.
  - Utilized the Input Capture Unit for precise calculations.
  - Displayed real-time distance readings on an LCD.
- **Infrared–Controlled Interactive LED Matrix Display (ARM Based)**
  - Implemented moving objects within the LED matrix for visual engagement with STM32.
  - Utilized interrupts, GPIOs, RCC, and SysTick for precise control and incorporated infrared technology for remote control, enhancing user interaction.
- **Microcontroller Song Play with Adjustable Frequency (ARM Based)**
  - Controlled a Digital to Analog Converter to play sampled songs through a speaker with the use of STM32.
  - Explored adjustable frequency settings, enabling faster or slower playback.

▪ Embedded Systems Automotive Course

➢ **Topics Covered:**

- AUTOSAR basics
- Automotive Communication Protocols (CAN, LIN), Diagnostics
- OSEK

LANGUAGES

- **Arabic:** Native
- **English:** Near-native proficiency
- **French:** Intermediate proficiency
- **Spanish:** Intermediate proficiency