HUSSEIN MOHAMED SAAD

EMBEDDED SOFTWARE ENGINEER

Cairo,Egypt
+201091035533
eng.hussein.saad1@gmail.com

As a highly motivated and self-driven recent graduate ranked second in my class with a cumulative GPA of 3.35 with a solid foundation in Object-Oriented Programming, data structures, problem-solving skills, and algorithms, I am eager to leverage my technical skills and project experience in a challenging role within the field embedded systems. With a strong background in C/Embedded C, real-time operating systems, and machine learning classification algorithms, I aim to contribute effectively to innovative projects and continue growing as a professional in a dynamic and collaborative environment. My ability to work under pressure and dedication to continuous learning equip me to excel in fast-paced and demanding roles.

TECHNICAL TRAINING

C/Embedded C Course | NTI

July 2022 - August 2022
- Gained proficiency in C programming language.
- Developed a School Management System using doubly linked lists.
  (https://github.com/Soonarated/School-Managment-system)

ACADEMIC PROJECTS

EMBEDDED SYSTEMS PROJECT | FINAL SEMESTER

March 2024 - May 2024
- Learned AVR interfacing with ATmega328.
- Interfaced LCD, sensors, and implemented SPI and UART communication protocols.
- Developed a Multimeter using Arduino to measure resistance and voltage.

Graduation Project: Self-Driving Car

October 2023 - July 2024
- Phase 1: Vehicle Control
  - Implemented steering, braking, and throttling control using PID controllers.
- Phase 2: State Estimation
  - Developed a state estimation scheme utilizing Extended Kalman Filter for tracking car movements and heading.
- Phase 3: Computer Vision
  - Built a traffic classification and detection model using CNN (not yet integrated in real-time due to resource constraints).
- Phase 4: Motion Planning
  - Designed algorithms to determine the optimal route using Dijkstra's and A* algorithms based on shortest path criteria.

SKILLS

- Proficiency in C, C++ and Java
- AVR interfacing, ATmega328, SPI, UART and Timers.
- Excellent problem-solving skills.
- Data Structures and Algorithms
- Good knowledge of RTOS
- Object-Oriented Programming (OOP)
- Database and SQL
- Adaptability, ability to work under stress and Self-learner

EDUCATION

BACHELOR OF COMMUNICATION AND INFORMATION ENGINEERING

Helwan University, 2019 - 2024