Ziad Ashraf Ahmed

Computer Engineering and Software Systems Fresh graduate
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military status: Exemption

EDUCATION

B. Eng. Computer Engineering and Software Systems
Faculty of Engineering Ain Shams University (ICHEP) | Cairo, Egypt
Dual Degree: University of East London | London, United Kingdom Sept 2019 – June 2024
Cumulative Grade: 3.35 Excellent

GRADUATION PROJECT

ASUSAR24 – Embedded Software Tooling Development (Cordoba) (Sponsored by Garraio LLC)

- Developed an enhanced user configuration tool for the RTE layer in AUTOSAR for the ASUSAR24 project.
- Proficiently parsed ARXML files into SWC files, ensuring accurate representation of software components and interfaces.
- Implemented robust error checking mechanisms to ensure data integrity and reliability.
- Added Event-to-Task Mapping functionality by integrating with the OSEK Team.

Grade: Excellent (A+)

PROJECTS

CarWindowControlSystem-RTOS [GitHub Repository]

- Developed a real-time OS application for controlling car windows using Tiva C Microcontroller
- Implemented advanced features such as Auto-Up and Auto-Down window control.
- Integrated obstacle detection using limiters to ensure safety.
- Utilized semaphores and mutexes for effective synchronization.
- Controlled window movement with precision motors and motor drivers.

Embedded-project-calculator-Timer-Stopwatch using Tiva C microcontroller [GitHub Repository]

- Developed an embedded application featuring a calculator, timer, and stopwatch using the Tiva C microcontroller.
- Integrated keypad and display for user input and output.
- Utilized interrupts to handle user interactions efficiently.
- Followed abstraction layers for modular and maintainable code structure.
- Employed IAR Embedded Workbench for development and debugging.

SLR(1) Compiler Project [GitHub Repository]

- Developed a compiler in Tiny language to tokenize input, validate correctness, and generate parse trees.
- Implemented SLR(1) parsing, grammar augmentation, and parse table generation within a Tkinter-based GUI.
- Supported DFA and RegExp handling for "repeat-until" statements with tokens like repeat, until, ID, NUM, and comparison operators (>, <, =, etc.).
- Designed functions for grammar augmentation, closure finding, and GOTO computation to ensure smooth parsing and state transitions.

Automata Conversion Tool [GitHub Repository]

- We developed a python software tool with a user-friendly graphical interface to automate the conversion of non-deterministic finite automata (NFA) to deterministic finite automata (DFA).
- The tool also converts context-free grammar (CFG) into Pushdown Automaton (PDA), making it easier to visualize and work with complex automata concepts.

Multiplayer-CarRacing for Distributed Network Project [GitHub Repository]

- Converted a single-player Python car racing game into a multiplayer version.
- Implemented socket programming for real-time communication between clients and server.
- Added a chat feature for in-game player communication.
- Utilized AWS Cloud for hosting and managing the game server.
- Ensured smooth gameplay experience with optimized network communication and server management.

TRAININGS

Embedded Systems Essentials course (Siemens)	July 2024 – Sep 2024
CCNA Training (NTI)	July 2023 – Aug 2023
Embedded Systems Training (sprints)	Aug 2022 – Oct 2022
Android development Training (sprints)	Aug 2021 – Oct 2021

TECHNICAL SKILLS

Languages: Embedded C, C/C++, Python, Dart, Java, HTML/CSS, VHDL

Frameworks and Tools: Flutter, Android, PyQT, Git, Visual Studio, PyCharm, Android Studio, VS Code, IAR, FreeRtos

Automotive Software: AUTOSAR, RTE (Runtime Environment), RTOS (Real-Time Operating Systems), ARM architecture

LANGUAGE SKILLS

English intermediate level with IELTS score 6.0 Sep 2020