KARIM SHERIF

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EDUCATION

Bachelor of Science in Mechanical Engineering, American University in Cairo   2017
Overall GPA: 3.80 / 4.00   *Summa Cum Laude (Highest Honors)*
Concentrations: Materials and Manufacturing, Mechatronics
Academic Achievement Scholarship

IGCSE, Saint Fatima School   2012

EXPERIENCE

Senior Electronic Engineer, Digitaltest, Cairo, Egypt   Mar 2023 – Present
- Delivered 40+ customer applications across Europe, USA, Canada, and Mexico.
- Developed a bespoke LED testing platform, handling everything from customer requirements, component selection, hardware and software integration, delivery and training, and resulting in expanding the company's capabilities into optoelectronic validation.
- Introduced standardized wiring diagrams, authored libraries for common elements, and created scripts to generate wiring lists for technicians, reducing errors and improving team-wide efficiency.
- Engineered interface PCBs to connect company systems with industry standard connectivity platforms, extending product compatibility and unlocking new business opportunities.
- Designed 10+ production PCBs to streamline fixture manufacturing and reduce build times.
- Coordinated with manufacturing technicians to improve data transfer from design engineers and obtain specialized tooling to improve process efficiency and reduce error.
- Contributed to the R&D of the new generation of testers, designing test boards and writing scripts.

Freelance Electronic Design, Cairo, Egypt   Jan 2019 – Dec 2024
- Designed and implemented an electrical control cabinet for a car-sized turntable with manual and mobile control
- Designed, prototyped, and manufactured a music-reactive controller for addressable LED strips
- Designed and prototyped a sliding screen mechanism for marketing applications

Head R&D Engineer, Solace Controls, Cairo, Egypt   Dec 2018 – Dec 2021
- Led the design, prototyping, and production of 6 smart home products.
- Improved hardware and firmware reliability and features
- Introduced Slack and Jira to improve communication and planning
- Managed complete smart home installations on residential and commercial sites, working directly with 30+ clients, from site survey to post-installation support
- Authored work instructions, datasheets, and installation procedures

PROJECTS & COURSES

Udacity Advanced Embedded Systems Nanodegree, egFWD   Aug 2022
- Implemented port, DIO, interrupt and system timer drivers for an ARM Cortex-M4 microcontroller
- Implemented an Earliest Deadline First (EDF) scheduler in FreeRTOS
- Applied static, dynamic system design on an automotive project using layered architecture and UML
- Wrote detailed API references for all modules and components

Participant, C(4F)$_2$ Hackathon by Dell Technologies   Winter 2021
Member, FabLab AUC   Spring 2017

SKILLS

Languages (spoken and written):   Arabic, English

Software
Programming & Electronics: .NET, Git, KiCAD EDA, C, ARM, FreeRTOS, Jira, UML
Mechanical Engineering & Design: SolidWorks, MATLAB, AutoCAD