Mai Mohamed Kamel

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Location: Cairo, Egypt

PROFESSIONAL SUMMARY

Passionate and detail-oriented Web Developer with hands-on experience in building responsive, user-friendly websites and web applications. Proficient in HTML, CSS, JavaScript, and modern frameworks such as React and Node.js. Skilled in designing Frontend web architecture and Back-end integration, debugging, and performance optimization. Committed to clean code, UI/UX excellence, and continuous learning to deliver impactful digital solutions aligned with business goals.

WORK EXPERIENCE

Embedded Systems Engineer (Siemens DISW Sponsorship)

Faculty of Engineering, [Helwan University] — Cairo, Egypt
Oct 2024 – July 2025

- Collaborated with Siemens DISW to develop a Parallel Secure Boot Strategy enhancing bootloader performance and system security.
- Designed and implemented bootloader code for the Infineon TC399XP ECU and developed low-level drivers (AES, TRNG, Command Sequencer, Bridge Driver) for the HSM core.
- Optimized CMAC algorithm in C for the HSM hardware AES module to ensure secure and efficient firmware validation.

Systel Telecom – Internship
Sep 2024 – Oct 2024
• Introduced to telecom infrastructure, microwave, and broadband communication systems.
• Studied fiber optics, CCTV systems, and networking fundamentals.

Full Embedded Systems Diploma – Information Technology Institute (ITI)
Aug 2023 – Sep 2023
• Trained in embedded systems fundamentals, C programming, and embedded C.

EDUCATION

Bachelor of Communication and Information Technology
Faculty of Engineering, Helwan University — Cairo, Egypt
Oct 2020 – Jul 2025
GPA: 3.22

Open-Source Web Development Intern – NTI Hire Ready Program
National Telecommunication Institute (NTI) — Cairo, Egypt
Oct 2025 – Feb 2026

- Completed Open-Source Web Development Track focused on modern full-stack technologies and collaborative software practices.
- Developed and contributed to open-source web projects using HTML5, CSS3, JavaScript, React.js, and Node.js.
- Utilized Git and GitHub for version control, pull requests, and community-driven project contributions.
- Implemented responsive UI components and optimized code quality through Agile sprints and peer code reviews.
- Attended Business English communication modules focused on technical writing, email professionalism, and presentation skills.

SKILLS

Technical Skills

- Programming Languages: JavaScript, Python, HTML, CSS, C, C++
- Web Development: React.js, Node.js, Express.js
- Front-End Tools: Bootstrap, Tailwind CSS, RESTful APIs, JSON
- Back-End & Database: MySQL, MongoDB, SQL
- Version Control: Git, GitHub
- Development Tools: Visual Studio Code, Postman, Figma
- Web Hosting & Deployment: GitHub Pages, Netlify
- Microcontroller Basics: STM32, Embedded C (foundational experience)
- Productivity Tools: Microsoft Office (Word, Excel, PowerPoint)

Soft Skills

- Strong collaboration and teamwork
- Leadership and project coordination
- Good organizational skills and attention to detail.
- Effective multitasking and time management

LANGUAGES
- Arabic: Native
- English: Fluent
- French: Intermediate (B1)

CERTIFICATIONS

- **NTI Hire-Ready Internship (Open-Source Web Development Track)** – National Telecommunication Institute (NTI) — *2025*
- **Graduation Project Sponsorship Certificate** – Siemens Digital Industries Software (DISW) — *2025*
    Project: "Parallel Secure Boot Strategy for Software Applications."
- **Machine Learning Specialization** – Coursera (by Andrew Ng) — *2024*
- **Internet of Things (IoT) Workshop** – Information Technology Institute (ITI) — *2024*
- **ARM Microcontrollers (Cortex-M4) Training** – Eng. Amgad Samir — *2024*
- **Systel Telecom Internship** – Systel Telecom — *2024*
- **Full Embedded Systems Diploma** – Information Technology Institute (ITI) — *2023*

COURSES

Machine Learning Specialization – Coursera (by Andrew Ng)

Jul 2024 – Sep 2024

• Covered supervised learning (regression and classification), advanced learning algorithms, and unsupervised learning.

• Studied recommender systems and reinforcement learning foundations.

ARM Microcontrollers (Cortex-M4) – Eng. Amgad Samir

Jul 2024 – Jul 2025

• Learned ARM Cortex-M3/M4 architecture and low-level embedded programming.

• Worked with STM32F446RE (Nucleo) and STM32F103C8T6 (Blue Pill) boards.

PROJECTS

- **Personal Portfolio Website**
    HTML, CSS, JavaScript
    • Built a responsive portfolio website showcasing projects, skills, and contact information.
- **Bootloader for STM32F446RE with CRC Integration**
    C, STM32CubeIDE, Embedded Systems
    • Developed a custom UDS-like bootloader supporting firmware upload, erase, and memory operations.
    • Implemented CRC-32 integrity checks and RDP-level security for firmware protection.
- **Detecting Websites Involved in Phishing Using Machine Learning**
    Python, Streamlit, Lightning AI, scikit-learn
    • Applied data preprocessing, feature engineering, and feature selection for dataset refinement.
    • Trained multiple ML models including Random Forest, SVC, Logistic Regression, and BERT for phishing detection.