KIROLOS BOTROS

Software Engineer | Programming & ICT Education Specialist

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Summary

Results-oriented Software Engineer and Technical Instructor with over 5 years of experience specializing in AI Engineering, Robotics, and Embedded Systems. Proven track record in architecting comprehensive ICT curricula and leading high-impact programming tracks for students within national initiatives (DECI) and professional syndicates. Expert in Python and software logic, with a unique ability to bridge the gap between advanced engineering concepts and accessible, scalable digital education for the next generation of tech leaders.

Work Experience

Education Lead |Smart Minds Academy | Oct 2023 – Present

- Leads a team of instructors to maintain high-standard technical training and digital transformation.
- Developed and automated a proprietary Learning Management System (LMS) using AI tools to optimize student engagement and content delivery.
- Engineered high-level technical strategies and system automation to streamline educational operations.

Software Programming Instructor
Egyptian Engineers Syndicate | Feb 2025 – Feb 2026(Part-time)

- Instructing youth in Robotics, Embedded Systems, and IoT.
- Successfully mentored 200+ students in building functional hardware-software prototypes presented to the syndicate board.

Programming Instructor | DECI (Digital Egypt Cubs Initiative)
Contractual via Almentor | Jan 2025 – Sept 2025

- Delivered specialized programming tracks for high-potential students within the national "Digital Egypt Cubs" initiative.
- Simplified complex software engineering concepts and fostered logical thinking across diverse technical tracks.

ICT Education Specialist & Curriculum | Digital Projects | Oct 2024– Ongoing

- Architected a comprehensive digital ICT curriculum for (Grades 4-12).
- Engineered an automated ICT Review Platform featuring advanced registration and data collection systems.
- Designed high-fidelity technical visuals and interactive infographics to facilitate complex concept retention.

Digital Technical Instructor|Udemy| 2024 (Freelance / Remote)

- Developing and recording professional-grade technical courses in Cyber Security and Software Programming.
- Creating structured, project-based learning modules for global learners.

Artificial Intelligence Engineer, Outlier | Jan 2024 – Jan 2025(Freelance / Remote)

- Training and optimizing Large Language Models (LLMs) through rigorous technical evaluation and reinforcement.

Programming Instructor, IM Academy | Jun 2021 – Jul 2022
Taught core programming fundamentals and organized competitive coding events to build a technical community.

Education

[2017- 2022] Bachelor of Communications and Electronics Engineering - Suez Canal University
[June 2022] Graduation Project: smart vision for blind people:

- Grade: A
- Led a team of four members in the project planning, development, and testing phases.

Certifications

- [October 2024] Training Of Trainers Certificate (TOT) - ITIDA - TIEC
- [May 2024] Ethical Hacking - Mahara-Tech - ITI
- [April 2024] Google Career Certificate in Cybersecurity - Google.
- [February 2024] CCNAv7 - Cisco Academy - NTI
- [November 2023] Linux and SQL - Coursera
- [October 2023] Networks and Network Security - Coursera
- [December 2021] Mastering Mobile Core Networks -Udemy
- [June 2020] Python for Everybody Specialization - Coursera

training

- [August 2021] Wireless Communication for IoT Training - ITI:

Acquired knowledge of IoT architecture, protocols (Wi-Fi, Bluetooth, Zigbee, LoRaWAN), security, and optimizing connectivity.
Proficient in configuring, troubleshooting, and securing wireless communication in IoT systems.

Awards and Honors

- [August 2022] Best Project of the Year, Egyptian Junior Researcher Competition - Nile University
- [2022] Honored by Suez Canal University, Port Said University, Cairo University ,and Nile University for AI projects

Skills

Technical & Engineering Skills

- **Programming Languages:** Python, C++, Scratch (for educational logic).
- **Specialized Tech:** Artificial Intelligence (AI), Machine Learning for Robotics, Computer Science.
- **Hardware & Security:** Robotics & Embedded Systems, Network Security.

Education & Curriculum Design Skills

- **Instructional Design**: Curriculum Development, Project-Based Learning (PBL).
- **Pedagogy:** Student Engagement Strategies (K-12), Training & Facilitation.
- **Technical Writing:** Creating comprehensive technical documentation and curricula.

Professional & Leadership Skills

- **Leadership:** Team Leadership, Technical Talent Acquisition.
- **Soft Skills:** Strong Problem-Solving, Analytical Skills, Communication Skills, Time Management.

Language

- Arabic (Native)
- English (B2)