

Asmaa Hindawi

COMPUTER AND COMMUNICATION ENGINEER

Dibbiyeh, Lebanon | +961 76 689 085 | asmaa.a.hindawi@gmail.com | [LinkedIn](#) | [GitHub](#)

Summary

Published Computer and Communication Engineer (IEEE Xplore) with 3.5+ years across AI/Machine Learning, Cybersecurity, Networking, and Full-Stack Development. Designed a 99.2%-accuracy IoT Intrusion Detection System and built scalable Laravel/React.js/MySQL applications. CCNA-certified with hands-on Cisco networking expertise. A strong communicator, problem-solver, and mentor skilled at simplifying complex concepts through teaching, leadership, and cross-functional collaboration — passionate about applying AI-driven solutions to real-world engineering challenges.

Education

Rafik Hariri University BE in Computer and Communication Engineering RHU Dean's Honor List	2020 - 2025
Al Galilee High School Lebanese Baccalaureate in Life Science	2017 - 2020

Publications

A. Hindawi, O. Al Halabi, S. Al Sabouh, and A. El Arid, "An Efficient AI-Driven Intrusion Detection System for Resource-Constrained IoT Environments," *2026 5th IEEE IMCET*, Beirut, Lebanon, 2026. **Published in IEEE Xplore.** [\[View Publication\]](#)

Experience

Global International School (GIS) Coding and Robotics Teacher Part-Time	Ketermaya - Lebanon 2025 - Present
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- Delivered structured IT and Robotics curriculum to 160+ students across 16 sections (Grades 1 - 8)
- Taught programming logic and computational thinking fundamentals to students in Grades 1 - 6
- Instructed hardware-software integration using BBC Micro:bit and MakeCode for Grades 7 - 8

Integrated Digital Systems (IDS) Full-Stack Developer Remote	Beirut - Lebanon June - Aug 2025
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- Developed a secure Laravel/React.js meeting reservation system featuring Role-Based Access Control (RBAC), real-time booking, and AI-powered meeting summarization
- Optimized backend performance with MySQL and RESTful API architecture for scalable data processing
- Conducted systematic API testing and workflow validation using Postman

Rafik Hariri University Teacher Assistant	Mechref - Lebanon 2022 - 2025
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- Facilitated CCNA networking labs, including Cisco configuration and troubleshooting exercises
- Developed ABET-compliant educational projects to directly support the engineering program's accreditation
- Communicated complex AI, Logic Design, and Embedded Systems concepts to diverse students

Jaber Consulting AI Engineer Remote	Beirut - Lebanon Aug - Oct 2024
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- Developed and trained an RNN-LSTM deep learning model for gold price prediction
- Built scalable data preprocessing pipelines, including feature engineering and missing value imputation
- Evaluated model performance using RMSE and MAE metrics and compared deep learning results against Auto ARIMA

Projects

BE Graduation Project – AI-Driven Intrusion Detection for IoT Networks | [GitHub](#) 2024 - 2025

- Designed and implemented a real-time, AI-powered Intrusion Detection System (IDS) for IoT networks
- Applied feature selection using Extra Trees, XGBoost, KNN, and SVM, achieving 99.2%+ multiclass accuracy on the CICIoT2023 dataset
- Integrated the trained model with Suricata and Telegram for real-time cyberattack alerting
- Optimized the system architecture for low-resource, edge-device deployment

Extracurricular Activities

Rafik Hariri University Mechref - Lebanon Social Media Manager of the IEEE - RHU Student Branch 2022 - 2024

- Managed web development, content strategy, and digital presence for the IEEE RHU Student Branch
- Spearheaded technical workshops and development activities supporting the engineering program's ABET accreditation

Skills & abilities

Languages: Arabic (native), English (fluent)

Technical Skills:

Software Languages: C++, Python, SQL, C#, PHP

Web Development: HTML, CSS, JavaScript, SCSS, Bootstrap, Tailwind, Laravel, React.js

AI Assistants: ChatGPT, Claude, Google Gemini, GitHub Copilot

Machine Learning/Frameworks: TensorFlow Lite, Scikit-learn, XGBoost, Edge Impulse

Database: MySQL, Microsoft SQL Server

Server Management: Linux, XAMPP, MySQL Workbench, GitHub

Software: Packet Tracer, CST Microwave Studio, MATLAB, PyCharm, Arduino

IDEs: Visual Studio Code, Visual Studio

Design Tools: Photoshop, Illustrator, Premiere

Volunteering

IEEE Day - Ambassador 2023 - 2024 IEEE Day 2023 & 2024 | Rafik Hariri University

Honors & Awards

IEEE 2023 & 2024 Student Activities Committee, IEEE Regional Exemplary Student Branch Award

Certificates

Practical Cybersecurity Diploma	2024
Artificial Intelligence Diploma	2023
Cisco: Network Security	2023
CCNA3&4: Enterprise Networking, Security, and Automation	2023
CCNA2: Switching, Routing, and Wireless Essentials	2023
CCNA1: Introduction to Networks	2022
Entrepreneurship	2019