Esraa Mokhtar Mohamed

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Profile

Teaching Assistant and early-career researcher in AI and network security, with a focus on deep-learning-based intrusion detection and network traffic analysis. I have defended my master's research on AI-based intrusion detection for communications network security and I am seeking PhD opportunities in AI and cybersecurity.

Education

M.Sc. Research — 2026
Thesis: AI-Based Intrusion Detection for Communications

B.Sc. in Computer Systems Engineering — 2017-2022
Faculty of Engineering, Al-Azhar University, Cairo

Dissertation

"AI-Based Intrusion Detection for Communications Network Security"
Focused on deep-learning-based intrusion detection for communication networks, with emphasis on class imbalance, temporal modeling, and deployment-oriented evaluation using CNN–LSTM and CNN–BiLSTM framework

Research

Electrical Engineering Department, Faculty of Engineering, Qena University
PM.Sc. Researcher
Project: AI-Based Intrusion Detection for Communications Network Security

Publications

1. Mohamed Hamed, Esraa Mokhtar, Nahla Fathy Ahmed Omran, and Ahmed Abdel-Baset Donkol. "Enhancing Network Intrusion Detection with CNN-LSTM." *SVU-International Journal of Engineering Sciences and Applications*, 6(2):138–146, 2025.

2. Mohamed Hamed, Esraa Mokhtar, Nahla F. Omran, and Ahmed Abdel-Baset Donkol. "Towards Practical Network Attack Detection: A CNN–BiLSTM Framework with Calibration-Based Thresholding on CICIDS2017." *Advanced Sciences and Technology Journal*, 3(2):1–17, 2026.

Experience

Teaching Assistant, Faculty of Computers and Information, South Valley University — Jun 2023–Present
Teaching support, lab assistance, and student mentoring in computing-related courses.
Ongoing academic involvement in AI-based network security research.

Front End Developer, Al-Rowad IT Company — Sep 2022–Sep 2023
Developed web interfaces and implemented front-end solutions for production projects.

Technical Skills

Research/AI: Intrusion detection, deep learning, CNN, LSTM, BiLSTM, data analysis, model evaluation, threshold calibration.

Programming: JavaScript, React.js, Next.js, HTML5, CSS3.

Academic: Academic writing, literature review, presentation preparation, teaching support.

Languages

Arabic (Native), English (Very Good).