

Ibrahim A. Fares

PhD in Machine Learning & Cybersecurity

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Location: Zagazig, Egypt

Portfolio: <https://ifares.tiiny.site/>

Google Scholar: <https://scholar.google.com/citations?user=G33DEsgAAAAJ>

RESEARCH EXPERIENCE

- Machine Learning & Deep Learning
- Natural Language Processing (NLP)
- Large Language Models (LLMs)
- LLM Fine-tuning & Prompt Engineering
- Generative AI & Multimodal Models
- Optimization Algorithms
- Cybersecurity & Intrusion Detection
- Internet of Things (IoT)
- Federated Learning
- Transformer Architectures

Education

PhD in Optimizing ML for Cybersecurity

Title: Cyber Security Threats Detection in Internet of Things Based on Optimization Algorithms
Zagazig University, Egypt (2021-2024)

Master's in Using Optimization algorithms for IoT application

Title: Bio-Inspired Algorithms for Optimizing Dynamic Noisy Environment in Smart Cities
Zagazig University, Egypt (2018-2020)

BSc in Math. & Computer Science

Zagazig University, Egypt (2012-2016)

ACADEMIC EXPERIENCE

Lecturer

Zagazig University (2024-Present)

Assistant Lecturer

Zagazig University (2021-2024)

Demonstrator

Zagazig University (2016-2021)

Teaching Experience

I have been teaching computer science subjects for 10 years, including:

AI & Machine Learning:	Programming Languages:	Computer Science Fundamentals:
<ul style="list-style-type: none">• AI• Machine Learning• Deep Learning• Natural Language Processing	<ul style="list-style-type: none">• Python• C++• MATLAB• Web Programming	<ul style="list-style-type: none">• Data Structures• Algorithms• Compiler Design• Data Mining• Computer Networks

PUBLICATIONS

The following papers represent work where I was the primary researcher and conducted the majority of the research independently.

2025

1. **Ibrahim A. Fares**, M. Abd Elaziz, A. O. Aseeri, H. S. Zied, and A. G. Abdellatif, "*TFKAN: Transformer Based on Kolmogorov–Arnold Networks for Intrusion Detection in IoT environment*," Egyptian Informatics Journal (Q1), 2025.
2. **Ibrahim A. Fares** and M. Abd Elaziz, "*Explainable TabNet Transformer-Based on Google Vizier Optimizer for Anomaly Intrusion Detection System*," Knowledge-Based Systems (Q1), 2025.
3. **Ibrahim A. Fares**, M. Abd Elaziz, A. Dahou, and M. Shrahili, "*Federated Learning Framework for IoT Intrusion Detection Using Tab Transformer and Nature-Inspired Hyper-Parameter Optimization*," Frontiers in Big Data (Q2), 2025, Accepted.
4. **Ibrahim A. Fares** et al., "*Diagnosing Autism Spectrum Disorder Based on Modified Deep Learning and Feature Selection Technique*," Frontiers in Artificial Intelligence (Q2), Under Review.

2024

1. M. Abd Elaziz, **Ibrahim A. Fares** and A. O. Aseeri, "*CKAN: Convolutional Kolmogorov–Arnold Networks for IoT Intrusion Detection*," IEEE Access (Q2), vol. 12, pp. 134837-134851, 2024, doi: 10.1109/ACCESS.2024.3462297.
2. **Ibrahim A. Fares** and M. Abd Elaziz, "*FT Transformer for Intrusion Detection System in IoT*," Bulletin of Faculty of Science, Zagazig University, 2023, Accepted.
3. **Ibrahim A. Fares**, A. G. Abdellatif, M. Abd Elaziz, M. Shrahili, A. Elmahallawy, R. M. Sohaib, M. A. Shawky, and S. T. Shah, "*Deep Transfer Learning based on Hybrid Swin Transformers with LSTM for Intrusion Detection Systems in IoT Environment*," IEEE Open Journal of the Communications Society (Q1), 2024, Accepted.

2023

1. **Ibrahim A. Fares**, Aboul Ella Hassanien, Rizk M. Rizk-Allah, Roushdy Mohamed Farouk and Hassan Mostafa Abo-donia, "*Solving Capacitated Vehicle Routing Problem with Route Optimisation Based on Equilibrium Optimiser Algorithm*," International Journal of Computing and Mathematics, Jan 2023.

2020

1. **Ibrahim A. Fares**, Rizk M. Rizk-Allah, Aboul Ella Hassanien & Snasel Vaclav, "*Multiple Cyclic Swarming Optimization for Uni- and Multi-modal Functions*," International Conference on Innovative Computing and Communications, Jan 2020.

Technical Skills

AI & ML: Machine Learning, Deep Learning, NLP, Transformers, GenAI

Programming: Python, C++, Java, MATLAB

Data: SQL, NoSQL, Database Management

Web Development: HTML, CSS, JavaScript, DevOps

Specializations: Optimization Algorithms, Cybersecurity, IoT

References

Prof. Dr. Mohamed Abd Elaziz

(PhD supervisor)

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Prof. Dr. Mohamed Abdelrahim

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