# Ibrahim A. Fares

**PhD in Machine Learning & Cybersecurity**

**Contact:** ibrahimfares@science.zu.edu.eg | ifares.cs@gmail.com
**Phone:** (+20)01014399619
**Location:** Zagazig, Egypt
**Portfolio:** https://ifares-csi.github.io/
**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: |
|---|---|---|
| • AI<br>• Machine Learning<br>• Deep Learning<br>• Natural Language Processing | • Python<br>• C++<br>• MATLAB<br>• Web Programming | • Data Structures<br>• Algorithms<br>• Compiler Design<br>• Data Mining<br>• 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** and M. Abd Elaziz, *"Explainable TabNet Transformer-Based on Google Vizier Optimizer for Anomaly Intrusion Detection System,"* Knowledge-Based Systems (Q1), May 2025, vol. 316, 113351, doi: 10.1016/j.knosys.2025.113351
2. **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), June 2025, Vol 30, 100666, doi: 10.1016/j.eij.2025.100666.
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
4. **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.
5. **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.

**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)
Email: abd_el_aziz_m@yahoo.com

**Prof. Dr. A.M. Elsawah**
Email: amelsawah@uic.edu.cn

**Prof. Dr. Mohamed Abdelrahim**
Email: mohamed.abdelrahim@ugent.be