Faris Hamdi Rizk

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🎓 [Google Scholar](#) 🌐 [Website](#) in [LinkedIn](#) ⬤ [GitHub](#)

Education

Delta Higher Institute of Engineering and Technology (DHIET), Egypt　　Sep. 2021 – Present

Bachelor of Engineering in Electronics and Communication　　　　　　　　*GPA: 3.2/4.0*

- **Concentration**: Machine Learning and Computer Vision
- **Relevant Coursework**: Python Programming, Computer Science I & II, Signals Analysis, Micro-Processors, Statistics & Probability Theory, Linear Algebra, Calculus I & II, Discrete Mathematics, Projects management, Technical Writing
- **Independent Study**: Deep Learning for Computer Vision, Machine Learning, Data Analysis using Python, Image Processing, Data Structures & Algorithms, C/C++ Programming

Research Experience

Zewail City Computing Society, Zewail City of Science and Technology, Egypt　　Sep. 2024 – Present

Research Staff Member *– Applied Machine Learning Lab*

- Research Focus: Computer Vision, Applied Machine Learning, NLP, and Human-Computer Interaction (HCI)

Delta Higher Institute of Engineering and Technology (DHIET), Egypt　　Jan. 2023 – Present

Undergraduate Research Assistant *– Supervisor: Prof. El-Sayed M. El-Kenawy*

- Collaboration with: Computer Science and Intelligent Systems Research Center, Virginia, USA
- Collaboration with: Dr. Nima Khodadadi, University of Miami, Florida, USA
- Research Focus: Applied Machine Learning, Computer Vision, Optimization Algorithms

Research Interests

- **Primary Interests**: Computer Vision & Language, Visual Reasoning, Robotics, Machine Learning Applications
- **Secondary Interests**: AI in Education, AI for Social and Economic Development, and Ethical AI Practices.

Publications

- Abdelmalak M. E. S., Khodadadi N., Zaki A. M., Eid M. M., **Rizk F. H.**, et al. (2024). **Pothole Detection in Asphalt Roads: A Comprehensive Approach for Enhanced Road Maintenance and Safety with AlexNet Model**. In *Proceedings of the 2024 International Telecommunications Conference (ITC-Egypt)*, pp. 269–274. doi:10.1109/ITC-Egypt61547.2024.10620566.

- **Rizk F. H.**, Arkhstan S., Zaki A. M., Kandel M. A., & Towfek S. K. (2023). **Integrated CNN and Waterwheel Plant Algorithm for Enhanced Global Traffic Detection**. *Journal of Advanced Intelligent Systems*, **6**(2), 36–45. doi:10.54216/JAIM.060204.

- Sherif K., **Rizk F. H.**, Zaki A. M., Eid M. M., et al. (2024). **Revolutionizing Oil Spill Detection: A Machine Learning Approach for Satellite Image Classification**. In *Proceedings of the 2024 International Telecommunications Conference (ITC-Egypt)*, pp. 245–250. doi:10.1109/ITC-Egypt61547.2024.10620599.

- Kandel M. A., **Rizk F. H.**, Hongou L., Zaki A. M., Khan H., et al. (2023). **Evaluating the Efficacy of Deep Learning Architectures in Predicting Traffic Patterns for Smart City Development**. *Journal of Advanced Intelligent Systems*, **6**(2), 26–35. doi:10.54216/JAIM.060203.

- **Rizk F. H.**, Mohamed M. E., Sameh B., Zaki A. M., Eid M. M., et al. (2024). **Enhancing Student Performance Prediction with Greylag Goose Optimization Algorithm**. In *Proceedings of the 2024 International Telecommunications Conference (ITC-Egypt)*, pp. 32–37. doi:10.1109/ITC-Egypt61547.2024.10620568.

- **Rizk F. H.**, Elshabrawy M., Sameh B., Mohamed K., & Zaki A. M. (2024). **Optimizing Student Performance Prediction Using Binary Waterwheel Plant Algorithm for Feature Selection and Machine Learning**. *Journal of Advanced Intelligent Systems*, **7**(1), 19–37. doi:10.54216/JAIM.070102.

Skills

Programming Languages: Python (proficient), C/C++ (familiar)

Frameworks & Libraries: TensorFlow, Keras, PyTorch, OpenCV, NumPy, Pandas, Matplotlib

Deep Learning & Computer Vision: CNNs, Transformers, Object Detection, Image Segmentation

Tools: Jupyter Notebooks, Google Colab, Git/GitHub, Linux/Unix, LaTeX

Extracurricular Activities

Graphic Design Head   **Oct. 2023 – Present**
Google Developer Student Club (GDSC)   *DHIET, Egypt*
- Leading design team for event materials, club branding, and promotional content.

Graphic Designer   **Jan. 2023 – Oct. 2023**
Google Developer Student Club (GDSC)   *DHIET, Egypt*
- Designed graphics for events; collaborated on creative solutions.

Human Resources Member   **Oct. 2022 – Jan. 2023**
IHOW Organization   *DHIET, Egypt*
- Managed recruitment, onboarding, team-building; facilitated communication.

Competitions

2nd Place (out of 25 teams)   **Oct. 2023**
GDG DevFest Mansoura Hackathon   *Mansoura University, Egypt*
- Placed 2nd in GDG DevFest Mansoura Hackathon among 25 teams; developed a web platform for freelance opportunities in Egypt.

Languages

English: C1 Level (Advanced)

Arabic: Native Speaker