

# Gad Gad

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🌐 gadm

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## Education

MSc Computer science | Lakehead University, ON, Canada  
Thesis student - Research Assistant

2021 – Apr. 2023

BSc Computer engineering | Nile University, Egypt

2015 – 2021

Merit-based full scholarship for academic performance (CGPA: 3.88)

## Skills

- **Languages:** Python, C++
- **Frameworks:** Numpy, Keras, Pytorch, sklearn, Pandas, flask.
- **AWS:** Proficient in AWS ML services and experienced in managing AWS resources.

## Publications

### Peer-reviewed Journal Publications

- **Gad G**, Fadlullah Z. Federated Learning via Augmented Knowledge Distillation for Heterogenous Deep Human Activity Recognition Systems. *Sensors*. 2023; 23(1):6.
- **Gad, G.**, Gad, E., Cengiz, K., Fadlullah, Z., & Mokhtar, B. (2022). Deep Learning-Based Context-Aware Video Content Analysis on IoT Devices. *Electronics*, 11(11), 1785.

### Peer-reviewed Conference Publications

- **G. Gad**, G. Eyad, B. Mokhtar “Towards optimized IoT-based context-aware video content analysis framework” in IEEE 7th World Forum on Internet of Things, 2021.
- **G. Gad**, A. Annaby, M. Saeed, NK. Negied, “real time lane instance segmentation using SegNet and image processing” in IEEE Novel Intelligent and Leading Emerging Sciences, 2020.

### Poster Presentations

- **Gad Gad** and Zubair Md Fadlullah, “Applying Computer Vision and Deep Learning to Semen Morphology and Motility Analysis,” Vector Institute Computer Vision Symposium, Oct. 2021.

## Awards

- Vector Institute AI scholarship recipient 21/22 Sept. 21
- Best Poster Award at NRSC 2020 conference Sept. 20
- 3<sup>rd</sup> place in IT&CS track in the Egyptian junior researcher competition Aug 20
- 1<sup>st</sup> place in “Networking” course project in the Undergrad Research Forum Jul. 19

## Teaching

- Teaching Assistant, Lakehead University Sept. 21
- Junior Teaching Assistant, Nile University Sept. 20

## Experience

### Research Assistant, Lakehead University

Sept. 21- Present

- Conducting research in ACCESS research group on federated learning, knowledge distillation, and differential privacy.

### Software engineer at Delta-care

Apr. 21- Aug. 21

- Developed the backend of an automatic microscope.
- Developed deep learning models to automate semen motility and morphology tests.

### Software Intern at Vortex

Sept. 20- Jul. 21

- Software development for Vortex RoboSub 2021 competition Autonomous Underwater Vehicle (AUV) team.
- Designed and implemented collaborative ROS nodes for smart underwater detection and motion planning.

### Machine learning intern at UN ESCWA and UN OICT

Nov. 20- May 21

- Satellite imagery analysis for urban development.

## Online Learning

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- Deep learning specialization
- TensorFlow developer professional Cert.
- *Advanced data analysis nanodegree*
- AI for medicine specialization
- *AWS certified ML specialist*
- Software Testing MicroMaster
- Introduction to Genomics technologies
- *Advanced machine learning specialization (ongoing)*

## Extracurricular Activities

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- **Contestant** OpenCV international AI competition.
- **Contestant** ACM competitive programming competition. Passed qualifications.
- **Contestant** Google Code Jam competitive programming competition. Passed qualifications.
- **Writer** Nu-Insider newspaper (university newspaper)