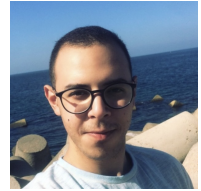


Gad Gad

✉ ggad@lakeheadu.com 📍 Ontario, Canada ☎ +1 807-358-7137
🔗 gadm21 🔗 linkedin.com/in/gadm/ 🔗 gadm21.github.io



Education

- 2021 – 2023 📖 **MSc Computer Science, Lakehead University, ON, Canada**
Thesis student - Research and teaching Assistant
- 2015 – 2021 📖 **BSc Computer Engineering, Nile University, Egypt**
Merit-based full scholarship for academic performance.

Skills

- Languages 📖 Python, C++
- Coding 📖 Numpy, Keras, Pytorch, sklearn, Pandas
- Cloud Services 📖 AWS certified. Managing AWS ML services and resources.


Experience

- Sept. 21 - Present 📖 **Research Assistant, Lakehead University.**
Conducting research in ACCESS research group on federated learning, knowledge distillation, and differential privacy.
- Apr. 21 - Aug. 21 📖 **Software Engineer, Delta-care.**
Developed python backend of an automatic microscope. Developed deep learning models to automate semen motility and morphology tests.
- Sept. 20 - Jul. 21 📖 **Software Intern, Vortex.**
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.
- Nov. 20 - May 21 📖 **Machine Learning Intern, UN ESCWA.**
Satellite imagery analysis for urban development.

Key Projects

- AWS 📖 Voice assistant based on chatGPT and AWS.
Fine-tuning pre-trained language models on Twitter scrapped data.
- Machine Learning 📖 Image captioning, implementing Google's paper: Show and tell.
Video captioning, extending on image captioning.
Federated Learning with knowledge distillation & Differential privacy.
Lane instance segmentation.
- Data Science 📖 Website layout A/B testing.
Investigating Simpson's paradox.
Credit card default prediction.

Key Projects (continued)

- Satellite Imagery  Urban areas segmentation of 4-band multispectral images.
Urban development detection and analysis.
Landcover & crop classification using USDA CropScape.

Research Publications

Journal Articles

- 1 **G. Gad** and Z. Fadlullah, "Federated learning via augmented knowledge distillation for heterogenous deep human activity recognition systems," *Sensors*, vol. 23, no. 1, p. 6, 2023.
- 2 **G. Gad**, E. Gad, K. Cengiz, Z. Fadlullah, and B. Mokhtar, "Deep learning-based context-aware video content analysis on iot devices," *Electronics*, vol. 11, no. 11, p. 1785, 2022.

Conference Proceedings





- 1 **G. Gad**, G. Eyad, and B. Mokhtar, "Towards optimized iot-based context-aware video content analysis framework," in *IEEE 7th World Forum on Internet of Things*, 2021.
- 2 **G. Gad**, A. Annaby, M. Saeed, and N. Negied, "Real-time lane instance segmentation using segnet and image processing," in *IEEE Novel Intelligent and Leading Emerging Sciences*, 2020.

Talks and Presentations






- 1 **G. Gad** and Z. M. Fadlullah, *Applying computer vision and deep learning to semen morphology and motility analysis*, Oct. 2021.

Miscellaneous Experience

Awards and Achievements

- 2021  Vector Institute AI scholarship recipient. Awarded by Vector Institute.
- 2020  Best Poster Award, NRSC 2020 conference.
 3rd place in IT & CS track, Egyptian junior researcher competition.
- 2019  1st place in "Networking" course project, Undergrad Research Forum.

Certification

- 2021  AWS certified ML specialist. Awarded by AWS.
 Software Testing MicroMaster. Awarded by University of Maryland University College.
 Advanced data analysis nanodegree. Awarded by Udacity.
- 2020  TensorFlow developer professional Cert. Awarded by Google.
 Deep learning specialization. Awarded by deeplearning.ai

References

Available on Request