Gad Mohamed Gad Computer engineer

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in gadm

EDUCATION

BACHELOR | NILE UNIVERSITY   2017 - 2021
Major: **Computer Engineering** | CGPA: 3.85
with a merit-based full scholarship for academic performance

BACHELOR | MUST   2015 - 2017
 Major: **Electronics and Communications Engineering**, CGPA: 3.95

Publications

- *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.*

Skills

- **Languages**   C++ (mainly), Python, C, and Java
- **Tools**   TensorFlow, Keras, scikit-learn, OpenCV , ROS2, Cadence, Xilinx, and MATLAB
- Excellent command of English.

Experience

Computer vision and Robotics Engineer at Vortex   Oct. 20- present
- working in the software department for the RoboSub 2021 competition AUV team.

Computer vision Engineer trainee at Vortex   Sept. 20- Oct. 20
- I worked on projects in teams to assess technical and soft skills.
After this phase, selected candidates will join the RoboSub 2021 AUV team.

Intern at WINC, Nile university & ASRT   June. 20- Jul. 20
- A joint **research** project for modeling Covid-19 spread then record and track cases.
- My duty was to design & implement a blockchain network using RSA encryption.

Junior teaching assistant, Nile university   Sept. 19- Jan. 20
- Supervised students in the linear algebra course project.

Intern at National Research Center (NRC)   Aug. 19- Sept. 19
- Attended sessions by members of research centers at NRC and ERI.
- Participated in an edge detection project on FBGA.

Participant at IBM blockchain development workshop   Feb. 19
- worked with IBM engineers on a car agency management system using Hyperledger.
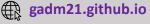
Awards & honours

- TICO innovation competition award   Nov. 20
- Best Poster Award at the NRSC2020 conference   Sept. 20
- 3rd place in IT&CS track in the Egyptian junior researcher competition   Aug 20
- Electronics Research Institute Internship certificate   Aug 19
- 1st place in "Networking" course project in the Undergrad Research Forum   Jul. 19
- Blockchain Developer exploratory & mastery badges from IBM   Feb. 19
- Scientific Research Fundamentals camp certificate from NU   Aug. 18

MOOCS

- Deep learning specialization
- TensorFlow developer professional Cert.
- AI in medicine specialization
- Software Testing fundamentals
- Software test management
- Blockchain: foundation & use cases
- Introduction to Genomics technologies
- Responsive website development basics

- *MCIT AWS machine learning training program(ongoing)*
- *Advanced data analysis nanodegree (ongoing)*
- Formal test verification *(ongoing)*
- *Advanced machine learning specialization (ongoing)*

Extracurricular activities

- Writer in Nu-Insider newspaper (university newspaper)
- Competed in ACM **competitive programming** competition and passed the qualifications phase to the ECPC.
- Competed in Google's Code Jam competitive programming competition and passed the qualifications phase.

Graduation project: Real-time Crash avoidance system using CV and AI :

- **GP1 –** implemented, tested, and presented perception algorithms: Lane detection, depth estimation, Traffic sign classification, and Car detection & tracking and control algorithms: Model predictive control (MPC).
- **GP2** – started with the objective of refining GP1 results by using deep-learning based methods and integrating results in an efficient pipeline. Many DL approaches were explored, YOLOv3 & LaneNet were used, and published a paper entitled: "*real-time lane instance segmentation using SegNet and **image processing***".

Machine learning projects

- Video labeling using attention mechanism (ongoing)
- Image captioning using transfer learning (pretrained InceptionV3) and LSTMs
- Covid19 spread prediction using seq2seq model
- Text summarization of customer reviews with seq2seq with attention
- Face Recognition using Haar Cascade classifier and PCA
- Lane instance segmentation
- Noisy MNIST classifications using KNN and evaluated with LOO cross validation, all without using and libraries.
- Risk modelling using tree-based models
- YOLOV3 detection pipeline using keras & Pytorch

Other projects implemented throughout my study

- Server/client Machine Instruction Interpreter with CPP :
    - Following **OOP** concepts like abstraction, inheritance, polymorphism, and encapsulation
    - Used UML diagrams to demonstrate relation and communication between objects
    - Implemented features like multithreading, TCP socket connection, and affinity setting
- Designing ALU with different adder families (CLA, RCA) on Cadence Virtuoso
- Making a Sign language translator gloves : python, Arduino, MPU, Bluetooth

❖ **Projects can be found on GitHub and some are documented on my website**