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| CONTACT INFORMATION | KAIST Munji Campus, S. Korea, Daejeon | <i>E-mail:</i> a.magd@kaist.ac.kr <i>Phone:</i> +82 10-9860-9709 <i>Personal:</i> https://amagd.github.io/ |
| RESEARCH INTERESTS | Deep Learning, Reinforcement Learning, Self-supervised Learning, Computer vision, Robotics (ordered from high to less higher interest) | |
| EDUCATION | Korea Advanced Institute of Science and Technology (KAIST) S. Korea, Daejeon Masters in Robotics <ul style="list-style-type: none"> • Advisor: Dongsuk Kum, VDC Lab • Perception team • Current CGPA: 4.00/4.30 | Aug 2021 - Present |
| | Innopolis University Russia, Innopolis Masters in Robotics <ul style="list-style-type: none"> • Transferred after 1st year • CGPA before leaving: 4.67/5.00 | Aug 2020 – June 2021 |
| | Nile University Egypt, Giza Bachelors in Mechatronics Engineering <ul style="list-style-type: none"> • CGPA: 3.98/4.00 (2nd among +100 students) | Graduated Fall 2020 |
| | Misr University for Science and Technology (MUST) Egypt, Giza Bachelor of Engineering (transferred after 1 st year) <ul style="list-style-type: none"> • CGPA before leaving: 4.74/5.0 (1st among +250 students) | Aug 2015 – Jun 2016 |
| HONORS & AWARDS | M.Sc. Full scholarship recipient at KAIST Finalist in IDAO (International Data Analysis Olympiad - Russia) 1st place in deep learning contest for master students in Innopolis University. Link Full scholarship recipient at Innopolis University 2 nd highest CGPA during graduation in all engineering disciplines at Nile University Best project in Rigid Body Dynamics in undergrad Bank of Egypt full scholarship recipient for B.Sc. for Nile University Highest CGPA at MUST (before transfer) | 2021 2020 2018 2016 2016 |
| PUBLICATIONS | <ol style="list-style-type: none"> AS Sayed, AA Mohamed, AM Aly, YM Hassan, AM Abdulaziz, HH Ammar, R Shalaby. Experimental modeling of hexapod robot using artificial intelligence. In <i>The International Conference on Artificial Intelligence and Computer Vision (AICV) 2020</i>. HA Elkholy, AT Azar, AM Aly, H Marzouk, HH Ammar. Classifying Upper Limb Activities Using Deep Learning. In <i>The International Conference on Artificial Intelligence and Computer Vision (AICV) 2020</i>. | |

1. AT Azar, **AM Aly**, AS Sayed, MEB Radwan, HH Ammar. Neuro-Fuzzy System for 3-DOF Parallel Robot Manipulator. In *Novel Intelligent and Leading Emerging Sciences Conference (NILES)* 2019.

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| SKILLS | Programming Languages: | Python, C++, C#, Java, MATLAB, LaTeX |
| | Libraries | PyTorch, TensorFlow, Keras, OpenCV, and packages related to data science, ROS |
| | Software | LabVIEW, SolidWorks, Fusion360, ANSYS, MSC Adams, MAXIMA |
| | Languages | Arabic (Native) – English (Fluent) – Korean (Basics) – Russian (knows how to say “I don’t speak Russian in Russian”) |

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| EXPERIENCE | <ul style="list-style-type: none"> • Experience in CVML: familiarity with almost all the key papers and ideas in the field. • Research: Familiarity with most of the impactful research papers in computer vision in particular, and AI in general (reading and reviewing many of the recent research papers, ranging from AlexNet to YOLO, all the way to SPiRL in RL, DDPM for diffusion models and the most recent in my current work of course like HDMAPNet) • Implementation: Reproducing results from AI papers (e.g. YOLO, ResNet, etc.) • AI Knowledge: enrolled in +8 courses for AI in KAIST and Innopolis, not to mention the endless self-study from open-sourced material (e.g. cs231n, DeepMind x UCL RL course, etc.) • Research assistant at SESC in Nile University during undergraduate period • Participation in competitions during my undergrad (e.g. ACM competitive programming, walking robot competition) • Head of scientific committee for Building club in MUST • Enrolled in FESTO professional diploma, working on (programming robotics, PLCs, pneumatics and hydraulic circuits, and programming CNCs) |
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| SELECTED PROJECTS | <p>Projects during my masters in Innopolis can be accessed through my Github page</p> <ul style="list-style-type: none"> • AI related: Training various models for self-driving tasks (lane segmentation, object detection, depth estimation, optical flow estimation, etc.) • Omnidirectional image stitching (360° stitching) and depth estimation for stereo cameras • Exploiting convex optimization techniques for obstacle avoidance path planning for UAVs • Implementing computer vision algorithm and hardware settings for UAVs to autonomously land on charging stations by localizing the UAV in 3D space • Simulating all different types of robotic manipulators using python or MATLAB <p><u>The following are projects during my undergraduate studies:</u></p> <ul style="list-style-type: none"> • Building an automated vacuum cleaner from scratch and controlling its motion via a PID controller • Applying PD, Feedback linearization + PD and Robust controls on SCARA manipulator • Creating “2048 game” with python • Designing a potato harvester machine using SolidWorks |
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- Simulating and studying different motions for Stewart Platform (a parallel manipulator) using MSC Adams
- Video encryption using MATLAB