Ziad Sameh Elnaggar

Mechatronics Engineering Undergraduate
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Objective

As a motivated Mechatronics Engineering student, I am eager to expand my knowledge and continuously develop my practical skills. I am always excited to explore innovative technologies and solve real-world challenges. I actively seek internship opportunities where I can contribute to impactful projects while learning from industry experts.

Education

The German University in Cairo (GUC) Cairo, Egypt
Bachelor in Mechatronics Engineering *Oct 2023 – Jun 2028*

- Enrolled with a scholarship for outstanding academic performance in high school.
- Cumulative GPA: 0.70 (German Scale, equivalent to 4.0/A+).
- Ranked 2nd in the Mechatronics Engineering department.

Al Bashaer International School Cairo, Egypt
International General Certificate of Secondary Education (IGCSE) *Sep 2020 – Jun 2023*

- Graduated with a score of 135.625%.
- Achieved the highest mark in the world in Advanced Level Mathematics and Advanced Level Arabic.

Experience

Junior Teaching Assistant Sep 2024 – Present
The German University in Cairo *Cairo, Egypt*

- Assisting the course instructor during course lab sessions.
- Responding to student inquiries.

Cooperation of Heterogeneous Agents in Industrial Applications Workshop Nov 2024 (2 weeks)
University of Stuttgart *Stuttgart, Germany*

- Worked on integrating TurtleBot3, Unitree Go1 Robodog, and Franka Emika Panda to perform a sequential pick up and place operation in a smart factory.
- Set up PCs and installed ROS dependencies for project configuration.
- Developed control solutions for OpenManipulator X and integration node.

Robotics Instructor (Part-Time) Aug 2023 – Nov 2023
Mawaheb Academy *Cairo, Egypt*

- Instructed students from different backgrounds on Arduino basics, including electricity, circuits, and coding.
- Engaged students with practical and illustrative robotics lessons.
- Evaluated students, provided feedback, and worked with peers to foster a good learning atmosphere.

Camp Administrator (Freelancer) Nov 2021 – Present
Wellspring Egypt *Cairo, Egypt*

- Procured and managed materials and equipment for camp activities.
- Ensured quality and safety of equipment.
- Coordinated food delivery and distribution for participants.

Projects

GUC Innovators - Car for Shell Eco-marathon 2025 2024

- Responsible for the high-voltage system of the powertrain.
- Collaborating with the team to build a high-efficiency car for the event.

Jarvis (RoboCup Junior Robot) 2024

- Developed a robot named Jarvis for the RoboCup Junior competition in the Rescue Maze category.
- Led the design and implementation of Jarvis' autonomous navigation and decision-making algorithms.
- Worked on image detection models to enhance Jarvis' environment recognition capabilities.
- Integrated sensors and actuators for real-time environment mapping and decision-making.

Courses

Machine Learning Specialization Coursera
By Andrew Ng – Offered by Stanford University and DeepLearning.AI *2025*

- Learned Supervised Machine Learning (Regression, Classification, Scikit-learn, NumPy, Pandas).
- Studied Advanced Learning Algorithms (Deep Learning, TensorFlow).
- Explored Unsupervised Learning, Recommenders, and Reinforcement Learning.

MATLAB Onramp MathWorks
Introductory tutorial on MATLAB features and workflows *2025*

- Learned the MATLAB language and environment for analyzing science and engineering data.
- Got hands-on experience with commonly used MATLAB tools and workflows.

Technical Skills

Software: ROS, GIT, Docker, Arduino IDE, Adobe Photoshop, Adobe Premiere, Microsoft Office

Programming Languages: Python, Java

Languages: Arabic (Native), English (Bilingual), German (Basic)

Honors and Awards

- Extra Exceptional Scholarship by DAAD and GUC for outstanding academic performance (2025).
- Egypt's Champion in RoboCup Junior Egypt 2024 (Rescue Maze category).
- GUC Academic Excellence Award (2024).
- Outstanding Pearson Learner Awards (2023, 2024) in Advanced Level Mathematics and Advanced Level Arabic.
- Honored by the Egyptian Minister of Education for academic achievements (2023).

Extracurriculars

Power-Train & Electrical System Member, GUC Innovators 2024 – Present
German University in Cairo *Cairo, Egypt*

- Responsible for high-voltage system design in the Electrical and Powertrain track.
- Develop and test power distribution networks, motor controllers, and embedded systems for EV projects.
- Oversee manufacturing to ensure quality and reliability of electrical components.

Technical Team Member, Cura Club 2025 – Present
German University in Cairo *Cairo, Egypt*

- Contributing to the fabrication of an in-house Myo band using EMG sensors to control a prosthetic mechanical arm.

Member, IEEE GUC Student Branch 2024 – 2025
German University in Cairo *Cairo, Egypt*

- Participated in the Data Analysis and Embedded Systems tracks, gaining hands-on experience in both fields.

Member, Students' Senior Committee 2020 – 2021
High School *Cairo, Egypt*

- Organized school trips, collaborated with businesses, and managed senior uniform production and distribution.