

Ahmed Fathy Abdelkhalek

📞 +20 121-098-0505 📩 ahmedfathyabdelkhalek@gmail.com 🌐 ahmedfathyabdelkhalek.github.io/
LinkedIn: linkedin.com/in/ahmed-fathy-abdelkhalek/

Work Experience

Design Engineer Team Lead <i>FabriHub, Full-time</i>	Aug 2025 - Present Cairo, Egypt
<ul style="list-style-type: none">Leading a team of 4 design engineers to achieve an 80% project delivery rate.Managing the design-to-quote pipeline by communicating with other departments to define client requirements and assess DFM, costs, and feasibility.	
Teaching Assistant <i>The German University in Cairo, Full-time</i>	Sep 2024 - Jul 2025 Cairo, Egypt
<ul style="list-style-type: none">Taught 300+ students in several courses including Advanced CNC, Industrial Automation, CAD/CAM, and Electric Circuits II.Assisted in the preparation of course content, quizzes, and exams for the aforementioned courses.	
GUC-IAS Workshop: Cooperation of Heterogenous Agents in Industrial Application <i>University of Stuttgart</i>	Nov 2024 Stuttgart, Germany
<ul style="list-style-type: none">Integrated 3 robots, a Unitree Go1, TurtleBot, and Franka Emika Panda, for collaborative operations to perform sequential object handovers.Led the Unitree Go1 team, guiding, coaching, and directing team members to help achieve the aforementioned task.	
Mechatronics Technical Engineer, KUKA Department <i>Smart Systems, Full-time</i>	Jul 2024 - Sep 2024 Cairo, Egypt
<ul style="list-style-type: none">Developed automated solutions for different applications, including bathtub spray painting and pick and place, using KUKA robots and their simulation platform, KUKA.Sim.Implemented 12+ designs for numerous projects, including robotic cells, calibration tools, and robot teaching tables.	
Engineering Design and 3D Printing Services <i>Self-employed, Part-time</i>	Jul 2022 - May 2024 Cairo, Egypt
<ul style="list-style-type: none">Designed, manufactured, and tuned a Delta robot 3D printer that is capable of ± 0.15 mm tolerances.Provided design and 3D printing services for local clients in Egypt to accelerate prototyping phases.	

Education

MSc in Engineering and Material Science, Mechatronics Department <i>The German University in Cairo</i>	Feb 2024 - Nov 2025 Cairo, Egypt
<ul style="list-style-type: none">Thesis grade: Excellent (1.0) Overall grade: Excellent (1.0)	
BSc in Engineering and Material Science, Mechatronics Department <i>The German University in Cairo</i>	Sep 2018 - Jun 2023 Cairo, Egypt
<ul style="list-style-type: none">Thesis grade: Excellent (1.0) Overall grade: Very Good (1.8)	

Skills

CAD and Electronics: SolidWorks, AutoCAD, KiCad
Simulation: Simulink, Simscape Multibody, Gazebo Classic, ANSYS, KUKA.Sim
Programming Languages: Python, MATLAB, C++, , KUKA Robot Language (KRL)
Frameworks & Developer Tools: ROS1, Linux, Git, L^AT_EX
Languages: Arabic (Native), English (C1), German (A2)

Publications

- A. Fathy, O. M. Shehata and E. -S. I. Morgan,** "Development and Validation of Multi-Model Miniature Delta Robot Platform for Precise Manipulation Tasks," 2025 6th International Conference on Control, Robotics and Intelligent System (CCRIS), Guangzhou, China, 2025 
- A. Fathy, M. Ashraf and A. El-Badawy,** "Computed torque control of a prismatic-input delta parallel robot," 2022 4th Novel Intelligent and Leading Emerging Sciences Conference (NILES), Giza, Egypt, 2022 

Honors and Awards

3rd Best Paper Award	Oct 2022
2022 4th Novel Intelligent and Leading Emerging Sciences Conference (NILES)	Giza, Egypt

Certifications

SOLIDWORKS Additive Manufacturing Associate Dassault Systèmes	Jun 2025
SOLIDWORKS CAD Design Professional Dassault Systèmes	Apr 2025
SOLIDWORKS CAD Design Associate Dassault Systèmes	Apr 2025
McKinsey Forward Program McKinsey & Company	Jul 2024
Computer Vision for Engineering and Science Specialization Mathworks	Jun 2024
State Estimation and Localization for Self-Driving Cars University of Toronto	Nov 2023
Introduction to Self-Driving Cars University of Toronto	Oct 2023