

# Ahmed Gamal Abdelbaky

medogamal974@gmail.com

+201154509955

[linkedin.com/in/ahmed-gamal-a55916219](https://www.linkedin.com/in/ahmed-gamal-a55916219)

## Education

### **Cairo university faculty of Engineerin**

Bachelor's degree, Mechanical Design And Production Engineering

2020 - 2025

## Experience

### **Mechanical Engineering Intern**

Al Masnaa Al Harbi Qism Banha

Feb 2022 - Feb 2022 (1 month)

### **Mechanical Engineering Intern**

Nuclear and Radiation Safety Research center

Jul 2023 - Jul 2023 (1 month)

chemical reaction in nuclear reactor & ways of cooling nuclear reactor and it's cooling cycle & way of controlling the nuclear reactor

### **Mechanical Engineering Inter**

work Shop of Cairo university

Jun 2023 - Jun 2023 (1 month)

operating cnc machines and how to write code & welding technology, types of it and how to weld & Drilling technology and ways of drilling

### **Mechanical Engineering Inter**

ROBOTECH-EG

Jul 2022 - Aug 2022 (2 months)

Assigned to clear tasks and on-the-job training listed as follows :

Introduction to hydraulic and pneumatic system

Bearing and Belt calculation and design

Main types of electric motor and ways of connection

Detailed design calculation for robotic arm

Design a robotic arm on solid and simulate it

BUILT prototype of robotic arm using everything mentioned above

### **Mechanical Engineering Trainee**

RITEC Company

July 2024 - August 2024

- Conducted comprehensive training in machinery vibration analysis and balancing, focusing on diagnostics, data acquisition, and fault identification.
- Gained hands-on experience with vibration analyzers, accelerometers, tachometers, and balancing tools.
- Developed skills in condition monitoring, periodic machinery assessments, and single/multi-plane rotor balancing.

- Strengthened diagnostic and problem-solving abilities by identifying and analyzing machinery faults, including mass imbalance, misalignment, and bearing wear.

## **HA Consulting Group**

July 2024 - August 2024 (2 months)

- Completed training focused on **Classic Control**, **PLC Programming**, and **Electric Motor & Drive (VFD) Programming**.
- **Classic Control**: Installed and configured control components (circuit breakers, relays, etc.), reduced starting current in 3-phase induction motors, and performed power factor correction. Completed 26 simulation tasks (using EKTS, CADe\_SIMU) and 15 practical tasks in the lab.
- **PLC Programming**: Programmed Siemens PLCs (S7-1200) with TIA Portal and Factory IO for simulations. Configured various sensors (proximity, inductive, capacitive) and completed 24 tasks with Siemens PLCs and tasks with other PLC brands (Schneider, Delta).
- **Electric Motor & Drive Programming**: Configured VFDs for motor control, including speed adjustment, braking, and drive integration with PLCs. Conducted practical tasks with different motor drives (Yaskawa, Delta).

## **Power Plant Engineering Trainee**

Location: Karimat Company, Upper Egypt

September 2024 (1 month)

- Gained hands-on experience in operating and monitoring power plant systems, including **SCADA** for control and supervision.
- Learned about **Gas and Steam Turbines**, **Heat Recovery Steam Generators (HRSG)**, and **Boiler Operation**, with a focus on their components, control systems, and troubleshooting.
- Conducted **Disassembly and Installation** of key components:
  - **Journal Bearing**: Identified and resolved oil seal leakage issues.
  - **Jacking Pump**: Disassembled, inspected, and reassembled for maintenance purposes.
- Familiarized with power plant elements such as **strainers**, **dearators**, **gland steam condensers**, **main stop valves**, **spiral wall boilers**, and **steam coils**.
- Developed a solid understanding of **control systems**, valve operations, and flow control, contributing to plant efficiency and reliability.

## **Courses & Certification**

- Matlab course
- SKF bearing basics course
- CATEGORY II(**Basic Machinery Vibration**)

## **Project & Researches**

- Robotic arm and simulate it on solid work
- 6 Cylinder engine solid work modeling
- 2 stage Helical Gear Box Full Design and simulate it on solid work
- Fly Press Full-Design
- Solar PowerBank and made a prototype
- Windshield wiper Full-Design
- Full research of an environment impact for one of factories in Egypt
- Full research about **electric car** and it's impact

## **Skills**

### **❖ Software Skills**

- MATLAB
- Programing c++
- SolidWorks
- MITCalc
- R application

- **Technical Skills:**

- ❖ Vibration Analysis
- ❖ Machinery Condition Monitoring
- ❖ Balancing Techniques
- ❖ Fault Diagnosis
- ❖ Power Plant Systems: Gas and steam turbines, HRSG, boilers.
- ❖ Control Systems: SCADA monitoring and plant control.
- ❖ Maintenance and Installation: Journal bearings, jacking pumps, and valve maintenance.

- ❖ **Language**

- Arabic (**native speaker**)
- English (**c1**)