Abdallah Aboalmgd

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Objective

Recent Mechanical Engineering graduate with a strong academic record and hands-on experience in computational fluid dynamics (CFD), mechanical design, and simulation software such as ANSYS, SolidWorks, and MATLAB. Seeking an entry-level engineering position where I can apply my technical skills, contribute to innovative projects, and continue developing professionally in a challenging and growth-oriented environment.

Education

Bachelor degree of Mechanical Engineering
Alexandria University — Graduated: July 2023

- **GPA:** 3.52 / 4.0 (Excellent)
- **Class Rank:** 8th in department

Experience

Teaching Assistant – Fluid Mechanics Department
Alexandria University — September 2023 – March 2024

- Assisted in delivering coursework and lab sessions for Pumps, Compressors, and Computational Fluid Mechanics
- Supported students in understanding theoretical and practical aspects of turbomachinery and fluid systems
- Guided students in using simulation tools such as ANSYS Fluent and ANSYS CFX for fluid dynamics analysis
- Contributed to the preparation and evaluation of assignments, lab reports, and final projects

Trainings

Technical Trainee – Mosahamet El Behera Company
El Behera, Egypt — August 2022

- Completed hands-on training in the **operation, maintenance, and repair of heavy machinery**, including **excavators, loaders, and bulldozers**
- Learned diagnostic techniques to prevent mechanical failures and ensure optimal equipment performance
- Gained practical experience in **routine servicing, mechanical inspections**, and adherence to **safety procedures**
- Focused on enhancing **machine reliability, safety**, and **operational efficiency** in industrial environments

Technical Trainee – Sidi Kerir Petrochemicals Company
Alexandria, Egypt — July 2022

- Gained hands-on exposure to key power plant components and operational systems
- Studied stationary equipment such as boilers, heat exchangers, and cooling towers
- Observed the function and maintenance of rotating machinery, including pumps and compressors
- Developed understanding of industrial processes, equipment integration, and plant safety protocols

Technical Trainee – Alexandria Electricity Distribution Company
Alexandria, Egypt — July 2021

- Trained on **electricity distribution system components**, including **cables, insulators, and transformers**
- Participated in the maintenance and troubleshooting of internal combustion engines, focusing on performance optimization and fault detection
- Developed foundational knowledge in **electrical safety protocols**

Courses

- **MATLAB – SPE International, 2020.**
- **SolidWorks – SPE International, 2020.**
- **Technicians for Africa – Mantrac, 2022.**
- **Bearing Basics – SKF, 2023.**

Languages

- **Arabic (Fluent)**
- **English (B2 – upper intermediate)**

Programs

- **MATLAB | Simulink**
- **Microsoft Office (Word – Excel – Power Point)**
- **ANSYS suite – Fluent, CFX and Space Claim**
- **SolidWorks**
- **CF Turbo**
- **COMSOL**

Projects

Engineering the Future of Cardiac Support
Grade: A+ (Excellent) | Supervisor: Prof. Dr. Hassan Warda

- Designed and simulated a Mock Circulation Loop and Pulsatile Blood Pump to support LVAD (Left Ventricular Assist Device) technology
- Focused on advancing cardiac support systems using computational fluid dynamics (CFD) analysis

Mechanical Design and Hemodynamic Analysis of an LVAD

- Conducted a full mechanical design of an LVAD and performed hemodynamic simulations using ANSYS CFX
- Analyzed flow patterns and pressure distribution to evaluate performance and optimize pump design

Surge Detection in a Centrifugal Compressor using CFD

- Simulated compressor performance to identify surge onset conditions and flow instabilities using ANSYS CFX
- Provided insights into compressor stability and efficiency improvements

Wind Energy Feasibility Study – Saudi Arabia

- Analyzed wind speed and direction data using ANSYS Fluent to determine optimal locations for wind farm development
- Evaluated turbine placement and energy generation potential

CFD-Based Study on Tinnitus Treatment

- Investigated the potential of using fluid dynamics modeling to understand and develop non-invasive treatment strategies for tinnitus
- Performed simulations with ANSYS Fluent to analyze inner ear fluid behavior under various conditions