

Maher Alaa Aldeen

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Objective

To obtain a challenging Mechatronics engineer position utilizing my knowledge in designing, integrating, and maintaining automation systems in order to drive process improvement and increase efficiency. Seeking opportunities to continuously develop my technical skills while delivering high-quality results for the organization.

Education

Bachelor of Science – Mechatronics Engineering

Oct 2018 - June 2022

American University of Science and Technology | Beirut, Lebanon

GPA: 3.73/4.00

Portfolio: <https://github.com/MaherAlaaDeen?tab=repositories>

Publications

Title: “Automated Tomato inspection and Harvesting System using Robotic Arm and Computer vision in greenhouses”.

In proceedings of the Fifth International Conference on Advances in Computational Tools for Engineering Applications, pages 183-190, published by IEEE on August 02, 2023.

DOI: <https://doi.org/10.1109/ACTEA58025.2023.10194232>

Work Experience

Data Science Intern

June 2024 – May 2024

CODSOFT | Remote

<https://github.com/MaherAlaaDeen/CODSOFT>

- Titanic Survival Prediction
 - Developed and implemented a machine learning model using the Titanic dataset to predict passenger survival probabilities.
 - Utilized data preprocessing techniques and feature engineering to enhance model accuracy.
- Sales Prediction Using Python
 - Leveraged machine learning techniques to forecast product sales based on comprehensive data analysis
 - Contributed to optimizing advertising strategies for maximizing sales potential and ROI.
- IRIS Flower Classification
 - Trained a machine learning model to accurately classify Iris flowers into different species, demonstrating proficiency in classification tasks.
- Credit Card Fraud Detection
 - Designed and implemented a robust machine learning model for detecting fraudulent credit card transactions
 - Addressed data preprocessing challenges and applied advanced techniques to handle class imbalance.
- Movie Rating Prediction with Python
 - Developed regression models to predict movie ratings based on genre, director, and actors, contributing to data-driven decision-making processes.

Mechatronics Engineer: Internship

Aug 2021 – Oct 2021

Daher Foods Master Chips / Fourzol, Lebanon

- Applied engineering principles to analyze manufacturing processes, identifying bottlenecks and proposing optimization strategies that led to a 20% reduction in production cycle time.
- Assisted in the design and execution of experiments to test new materials, resulting in the identification of a cost-effective alternative, reducing production costs by 12%.
- Collaborated with the engineering team to create technical drawings and specifications for equipment upgrades, ensuring compliance with industry standards and safety regulations.
- Conducted root cause analysis on equipment failures, proposing and implementing preventive maintenance schedules that reduced downtime by 25%.
- Utilized CAD software extensively to develop 3D models for prototypes, aiding in the visualization and testing of new product designs.
- Presented findings on process improvements to senior engineers, contributing valuable insights and solutions to enhance overall operational efficiency.
- Received accolades for meticulous data analysis and technical problem-solving skills, contributing significantly to the successful completion of projects.
- Actively participated in weekly team meetings, presenting findings and contributing insights to project discussions.

Technical Skills

- **Programming Languages:** Python, C++, C, Assembly, MATLAB, PLC Ladder Logic.
- **Software and Tools:** AutoCAD Inventor, Fusion 360, PLC Programming, SCADA & HMI, Altium Designer, Arduino, PIC Series, Raspberry Pi, SIMULINK, Machine Learning, Deep learning, PID, ROS2, Computer Vision, Proteus, Multisim.
- **Technical Abilities:** 3D Modeling, Circuit Design and Analysis, Control Systems, Hydraulics and Pneumatics, mechatronic systems, kinematics and dynamics of machinery, sensors, actuators and drivers.

Certifications and Courses

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|---|----------|
| • EV Engineering Intro Job Simulation (Forage) | May 2024 |
| • Object Oriented Programming in Python (DataCamp) | Nov 2022 |
| • Unsupervised Learning in Python (DataCamp) | Aug 2022 |
| • Supervised Learning with Scikit-Learn (DataCamp) | Aug 2022 |
| • Introduction to Deep Learning with Keras (DataCamp) | Aug 2022 |
| • Introduction to Deep Learning with PyTorch (DataCamp) | Aug 2022 |
| • Introduction to TensorFlow in Python (DataCamp) | Aug 2022 |
| • Introduction to Deep Learning in Python (DataCamp) | Aug 2022 |
| • Joining Data in SQL (DataCamp) | Jul 2022 |
| • Introduction to SQL (DataCamp) | Jul 2022 |
| • Machine Learning A-Z: Hands-On Python and R In Data Science (Udemy) | Jul 2022 |
| • Image processing and computer vision with Python and OpenCV (Udemy) | Mar 2022 |
| • ROS2 Robotics developer-Using ROS2 in Python (Udemy) | Feb 2022 |
| • Embedded Electronics Bootcamp: From Bit to Deep Learning (Udemy) | Feb 2022 |
| • International Computer Driving License (ICDL) | Feb 2018 |

Soft Skills

- **Problem-Solving:** Ability to identify issues, analyze problems, and devise innovative solutions, essential in troubleshooting complex systems.
- **Adaptability:** Willingness and capability to quickly adjust to new technologies, tools, or working environments, considering the evolving nature of engineering fields.
- **Teamwork and Collaboration:** Capacity to work effectively within interdisciplinary teams, sharing insights and coordinating efforts to achieve project goals.
- **Communication Skills:** Clear and concise communication, both verbal and written, to convey technical information to various stakeholders, including team members, clients, and non-technical personnel.
- **Time Management:** Strong organizational skills to prioritize tasks, manage project timelines, and meet deadlines efficiently.
- **Attention to Detail:** Ability to meticulously focus on intricate aspects of designs, systems, or processes to ensure accuracy and quality in engineering work.
- **Critical Thinking:** Capacity to analyze situations, evaluate information, and make informed decisions or recommendations based on available data.
- **Continuous Learning:** Eagerness to learn and adapt to emerging technologies, staying updated with industry advancements and best practices.
- **Ethical Mindset:** Adherence to ethical standards and professional integrity, crucial in handling sensitive information and ensuring compliance with regulations.
- **Customer Focus:** Understanding and addressing the needs of end-users or clients, aiming to deliver engineering solutions that meet their requirements effectively.

Language Competencies

- Arabic : native language
- English: fluent (speaking, reading, writing) (IELTS: C1)
- German: Upper Intermediate (*Goethe-Certificate: B2*)