

AHMED HESHAM

Alexandria, Egypt | hello@ahmedseddik.tech | ahmedseddik.tech
linkedin.com/in/ahmedhesham612006 | github.com/ahmed-hesham07

Objective

Aspiring **Software Engineer & Data Scientist** with strong foundations in **AI, full-stack development, and engineering software**. Experienced in delivering end-to-end solutions that integrate **machine learning, automation, and industry standards (ASME/API)**. Passionate about building scalable tools that bridge **engineering, AI, and business outcomes**.

Experience

Data Science Intern

Remote

Accur Digital

Jan 2025 – Jun 2025

- Developed AI-based corrosion detection pipeline (90% accuracy on 5,000+ images), reducing inspection time by 70%.
- Automated log analysis of 1M+ entries, enabling 20% faster anomaly detection and root cause resolution.
- Applied NLP to 10,000+ maintenance records, improving scheduling efficiency by 25%.
- Built real-time dashboards (Matplotlib, Jupyter) reducing reporting time from hours to minutes.

Freelance Full-Stack Developer

Remote

Various Clients

2024 – Present

- Designed and delivered custom full-stack applications using React, FastAPI, and SQL.
- Built automation tools and robotics solutions to streamline client operations.
- Developed ML pipelines and predictive models to generate actionable business insights.

Skills

- Programming & Data:** Python (Pandas, NumPy, Scikit-learn, OpenCV, TensorFlow, Keras), C++, C#, SQL
- Frameworks & Tools:** React, FastAPI, Tauri, Git, Jupyter, ROS, VS Code
- Concepts:** Machine Learning, Deep Learning, NLP, Predictive Maintenance, OOP, Data Structures & Algorithms
- Soft Skills:** Problem Solving, Collaboration, Critical Thinking, Time Management

Projects

Vessel Guard – Desktop FFS Engineering Tool

- Tauri + React app for ASME B31.3 & VIII assessments.
- Calculates corrosion rates, remaining life, inspection intervals.
- Generates professional PDF reports; reduced assessment time by 40%.

BusinessWise Maintenance Analytics – Predictive Maintenance Platform

- Built ML models (LightGBM, XGBoost) achieving $R^2 > 0.85$ for failure prediction.
- Automated cost analysis on 500,000+ logs, cutting 60 staff hours/month.
- NLP clustering of 50,000+ service logs (80% accuracy) to surface failure modes.

Corrosion Detection & Risk Analysis Tool – Deep Learning Pipeline

- U-Net + ResNet34 with post-processing, achieving 95% precision on 1,000+ test images.
- Reduced structural risk estimation errors by 30%.

Engineering Consultancy Website – Portfolio Site (hrc-engineering.com)

- Responsive React + Tailwind website for Eng. Hesham Seddik.
- Features: services showcase, project gallery, and contact system.

Education

Bachelor of Engineering in Computer Engineering

Arab Academy for Science, Technology & Maritime Transport – Alexandria

Expected Graduation: 2028

Additional Activities & Achievements

- Participant – Asia-Pacific RoboCup (2018)
- National Champion – RoboCup Junior Egypt (2019)
- Participant – ECPC (Egyptian Collegiate Programming Contest) 2024