

ABDULLA APPAS

Mechanical Engineer & Cyber Security Consultant

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PROFESSIONAL SUMMARY

A multidisciplinary professional bridging the gap between physical systems and digital security. Currently serving as a **Production Engineer** in the UAE, I specialize in street light pole manufacturing and structural analysis.

My unique advantage lies in combining **Mechanical Engineering** expertise with advanced **Python automation**. I build custom software to automate complex engineering calculations, optimize industrial design workflows, and secure operational networks. I am adept at managing production lines, ensuring quality compliance, and developing software solutions for engineering challenges.

WORK EXPERIENCE

- Production Engineer** 2021 - Present
Gulf Pole Engineering – UAE
 - ▶ **Production Management:** Oversee the full manufacturing lifecycle of street light poles, ensuring strict adherence to structural safety standards, client specifications, and delivery timelines.
 - ▶ **Process Automation:** Developing proprietary Python-based software to automate wind load and structural calculations based on AASHTO standards, reducing manual calculation time by approximately 40%.
 - ▶ **Optimization:** Analyzed material usage patterns to implement waste-reduction strategies, significantly improving cost-efficiency in the production line.
 - ▶ **Quality Assurance:** Managing quality control protocols, coordinating with third-party inspectors, and ensuring all structural deliverables meet ISO safety requirements.

- Document Controller (Logistics Dept)** 2018 - 2021
Atiq Al Dhaheri – UAE
 - ▶ **Documentation:** Managed high-volume logistic documentation for steel pipe trading operations, ensuring 100% accuracy in tracking shipments and inventory records.
 - ▶ **Coordination:** Served as the central point of contact between the logistics team, suppliers, and customs agents to process shipping manifests and clearance documents.
 - ▶ **System Improvements:** Implemented a digital filing system for trading transactions, reducing data retrieval time and ensuring seamless audits of import/export records.
 - ▶ **Reporting:** Generated weekly stock level and delivery schedule reports to support the management team in supply chain planning.

EXPERIENCE (CONTINUED)

● Pre Delivery Inspector (PDI)

2016 - 2017

Hyundai Motor India

- ▶ **Vehicle Inspection:** Conducted comprehensive pre-delivery inspections on new vehicles, verifying mechanical integrity, paint quality, and electronics functionality against factory standards.
- ▶ **Defect Resolution:** Identified manufacturing defects and coordinated directly with technical service teams for immediate rectification before customer handover.
- ▶ **Reporting:** Maintained detailed inspection logs and quality reports, ensuring full compliance with Hyundai's global quality assurance protocols.
- ▶ **Analysis:** Assisted senior engineers in root-cause analysis for recurring mechanical issues identified during the PDI process.

TECHNICAL SKILLS

Engineering & Design

AutoCAD SolidWorks Structural Analysis
 Thermodynamics AASHTO Standards
 Production Planning Project Management

Cyber Security & IT

Python (Kivy/Tkinter) Network Security
 Penetration Testing Linux Admin
 Automated Scripting SQL / Database
 IoT Integration

KEY PROJECTS

Street Light Pole Calculation Software

PYTHON, GUI DEVELOPMENT

Developing a dedicated desktop application (GUI) to calculate wind loads and structural integrity for street light poles. The software automates complex engineering formulas based on international standards, significantly reducing calculation errors.

Job Tracker Application

PYTHON, SQLITE

Created a cross-platform desktop tool to track job status, manage client data, and generate automated reports. Currently working on porting the application to a mobile environment using Kivy.

Automated Safety Protocol (IoT)

PYTHON, IOT SENSORS

Developed a Python script to monitor IoT sensors on mechanical machinery, detecting thermal anomalies in real-time to prevent overheating and mechanical failure.