

Abdelrhman Ismail Ibrahim

Railway Operations Engineer

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Professional Summary

Experienced Railway Operation and Maintenance Engineer with a strong background in metro and monorail systems, specializing in automated and driverless train technologies. Proven track record in control center operations, train driving, maintenance, and emergency response across international transportation companies such as ALSTOM, YUJIN, and RATP DEV

Professional Experience

Operations Lead Engineer/ ALSTOM, Cairo

(02/2025 - current)

❖ OCC Supervisor – Cairo Monorail Project (Alstom) – CBTC Driverless System

- **Real-time Monitoring and System Supervision:** Overseeing monorail operations from the central control center using CBTC (Communication-Based Train Control) to ensure fully automated, safe, and efficient driverless train operations, while continuously monitoring system status and train movements to detect and resolve anomalies.
- **Service Schedule Management:** Managing and adjusting train schedules dynamically to maintain optimal headways, minimize delays, and enhance service efficiency by ensuring all trains adhere to predefined operational plans while making real-time modifications as needed.
- **Incident and Emergency Response:** Taking immediate action in case of system failures, train stoppages, door malfunctions, or power supply issues, coordinating closely with technical teams to diagnose problems and restore normal operations with minimal service disruption.
- **Coordination with Field Teams:** Maintaining seamless communication with maintenance crews, security personnel, and emergency response teams to ensure rapid intervention in case of technical malfunctions or safety concerns, directing teams efficiently for incident resolution.

- **Operational Data Analysis and Performance Reporting:** Analyzing train performance data, system alerts, and key operational indicators (KPIs) to assess efficiency, identify recurring issues, and improve service reliability while preparing detailed reports for management review and strategic decision-making.
- **Supervision through Centralized Control Systems:** Utilizing ATS (Automatic Train Supervision) and other advanced control systems to manage train speeds, station dwell times, and power distribution efficiently, implementing real-time route adjustments when necessary to ensure smooth operations.
- **Passenger Safety and Security Oversight:** Monitoring and enforcing safety protocols across the network, ensuring that emergency procedures, ventilation systems, lighting, and fire safety mechanisms function correctly, and addressing potential hazards proactively to maintain passenger safety.
- **Crisis Management and Stakeholder Communication:** Leading crisis response efforts by coordinating with governmental authorities, police, civil defense, and power providers to manage large-scale disruptions or emergencies, ensuring swift action while maintaining operational continuity.
- **Passenger Assistance and Service Quality Control:** Handling and resolving passenger complaints, monitoring customer feedback, and identifying service improvement areas while working with customer service teams to enhance the overall passenger experience.
- **Compliance with International Standards and Regulations:** Ensuring adherence to Alstom's operational guidelines and best global practices in driverless metro and monorail operations by implementing safety and quality control measures that meet or exceed regulatory requirements

❖ **Pre-Operation / Trial Operation Responsibilities (Testing & Commissioning Phase)**

- **Trial Operation Execution:** Conducted continuous 6-month trial runs to verify system readiness, performance, and safety of the CBTC driverless system prior to official handover.
- **System Integration Testing:** Validated communication and integration among ATS, SCADA, signaling systems, platform equipment, and onboard train systems.
- **Fault Identification & Root-Cause Analysis:** Monitored system abnormalities, analyzed technical issues, and coordinated with Testing & Commissioning teams to resolve faults.
- **Emergency Scenario Simulation:** Executed simulated failure scenarios—including power loss, signal failures, and train breakdowns—to ensure system response and safety readiness.
- **Testing Documentation & Acceptance Reports:** Prepared detailed test reports, punch lists, and validation documents to support the system acceptance process before commercial operation.

- **CBTC Performance Validation:** Verified automated control accuracy, train localization, system responsiveness, and adherence to safety limits.
 - **Coordination with Alstom Engineering & T&C Teams:** Collaborated with engineering experts to resolve technical integration issues and apply required software or hardware updates.
 - **Infrastructure Readiness Verification:** Assessed station and trackside readiness—including lighting, ventilation, power, and local control rooms—to ensure full operational functionality.
 - **Pre-Operation Safety Checks:** Reviewed fire protection, evacuation routes, escalators, elevators, and communication systems for compliance with global safety standards.
 - **Operational Staff Training:** Provided hands-on technical support and practical training for new operational staff to ensure smooth transition into revenue operation.
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Maintenance Engineer/ Y U J I N , Cairo

(12/2023 - 02/2025)

- Leaders of a fleet of technicians for maintenance, installation and modification of Korean trains (ROTEM) in the workshop of the third line and the second line of the Cairo Metro.
 - Maintaining, installing and modifying brakes, brake calipers and brake sensors
 - Maintenance, installation and modification of pneumatic equipment under the train, such as (air brakes, air tanks, air compressors,.....etc.)
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Operation Engineer / RATP DEV, Cairo

(06/2022 – 12/2023)

- **Metro Driver Certification:** Successfully completed and passed the rigorous examination required for the position of Metro Driver on the GREEN LINE 3. This certification process involved intensive training and assessment to ensure proficiency in operating metro trains safely and efficiently. (A t t a c h e d)
- **System Knowledge:** Possess a comprehensive understanding of train operating systems, including their software and hardware components. This includes familiarity with automated control systems, real-time monitoring, and diagnostics tools. Additionally, have in-depth Knowledge of railway signaling systems, encompassing both traditional and modern Signaling technologies, ensuring the safe and efficient movement of trains across the Network. (Attached)

- **Train Component Expertise:** Have extensive knowledge of the components and parts of Japanese trains from Mitsubishi and Korean trains from Rotem. This includes understanding the mechanical, electrical, and digital systems that make up these trains, enabling effective maintenance, troubleshooting, and operation.
- **Security and Safety Training:** Received extensive training in the security and safety protocols specific to railways and subways. This training covered a wide range of topics, including Emergency response procedures, risk assessment, and mitigation strategies. Emphasis was placed on maintaining high safety standards to protect passengers, staff, and infrastructure.
- **Emergency Evacuation Training:** Participated in multiple comprehensive training sessions focused on emergency evacuation procedures. These sessions included practical drills on evacuating stations and directing passengers to emergency exits, with specific training conducted at Kit Kat Station and Gamal Abdel Nasser Station. The training ensured readiness to handle various emergency scenarios effectively.
- **Fire Safety Training:** Completed a detailed course on fire safety, which included the proper use of fire extinguishers and other safety equipment. The training also covered fire prevention techniques, emergency response, and evacuation procedures in the event of a fire, ensuring the safety of passengers and staff.
- **Passenger Assistance:** Trained in providing assistance to passengers during train malfunctions both inside and outside tunnels. This training included communication strategies, managing passenger safety, and coordinating with emergency services to ensure prompt and effective response to any issues that arise.
- **Metro Line Supervision:** Gained significant experience in supervising metro lines, ensuring the smooth operation and coordination of train services. This role involved overseeing the daily operations, managing schedules, and resolving operational issues to maintain service reliability and efficiency.
- **Train Operation and Maintenance:** Acquired extensive hands-on training in operating trains within various settings, including yards, workshops, and storage rails. This included both heavy maintenance workshops, where in-depth repairs and overhauls are conducted, and light maintenance workshops, focused on routine checks and minor repairs. The training ensured proficiency in maintaining optimal train performance.
- **Technical Familiarity:** Developed a thorough understanding of the interior configurations and technical equipment of both Japanese trains (Mitsubishi) and Korean trains (Rotem). This included knowledge of the electrical systems, braking systems, control interfaces, and passenger amenities, ensuring the ability to operate and maintain these trains effectively.

Education

Bachelor of Mechanical Engineering

(Sep 2016 - Jun 2021)

- Cairo University, Lviv Polytechnic National university, Lviv / Ukraine
 - Grade: very good
 - Graduation project degree: very good
 - Registered with the Supreme Council of Egyptian Universities and registered with the Engineers Syndicate (equivalent to Cairo University)
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Training & Courses

Easy PMP Academy

- HVAC Course
- Plumbing System Course

Heavy equipment maintenance workshop (2020 – 2021)

- The Arab Contractors
 - Machinery and dynamo maintenance workshops
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SKILLS

- **Computer Skills**

- ✓ Very Good User of Microsoft Office (Word, Excel and Power Point)

- **Language Skills**

- ✓ Arabic: Mother tongue
- ✓ English: Very Good

- **Personal Skills**

- ✓ Strong attention to detail and good analytical skills.
- ✓ Advanced knowledge of mechanical and electrical locomotive systems.

- ✓ Excellent diagnostic skills.
 - ✓ In-depth area knowledge including road crossings, track curves, and tunnels.
 - ✓ Ability to concentrate for long periods.
 - ✓ Outstanding organizational and leadership skills
 - ✓ Good time management skills.
 - ✓ Able to contribute positively as part of a team, helping out with various tasks as required.
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P e r s o n a l I n f o r m a t i o n

- Nationality: Egyptian
 - Date Of Birth: 14/12/1998
 - Marital status: Single
 - Military status: Exemption
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A d d i t i o n a l I n f o .

- www.linkedin.com/in/abdo-work
- <https://bluetags.me/lkcLMn5cx4>