## Omar Essam El-Din Mohamed

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## PROFESSIONAL SUMMARY

A results-driven Project Management Information Systems (PMIS) Engineer with 10+ years of experience spanning construction, civil engineering, and data engineering. Demonstrated success in:

- Leading data warehouse initiatives and ETL pipeline development
- Implementing machine learning models for financial forecasting
- Automating workflows resulting in significant time savings
- Managing complex construction projects with budgets exceeding \$10M

## **EDUCATION**

Cairo University, Bachelor of Science in Civil Engi-

neering, May 2013 Overall Grade: Good (C)

Project Grade: Excellent (A)

Graduation Project: Steel Bridges Design

Orouba Language School

Graduation Score: 98.9% (405.5/410)

#### PROFESSIONAL EXPERIENCE

#### Programming and Data Engineering Experience

- Data Engineer Lead (AI & Automation) Rowad Modern Engineering (Aug 2024 – Present)
  - Led development of an internal NLP system using LLMs (GPT/Mistral) to summarize and draft replies to executive emails automatically
  - Designed and deployed an automated cash-in notification system integrated with financial data pipelines
  - Built a secure internal web UI to query and interact with MySQL, PostgreSQL, and MongoDB databases across projects
  - Expanded data engineering scope into applied AI/ML, handling both backend data processing and frontend user interaction
  - Coordinated across departments to scale automation tools, boosting productivity in HR, Finance, and PMO workflows

- IT Networking / Data Engineer Rowad Modern Engineering (Jan 2023 – Present)
  - Maintained MySQL databases on Linux Servers, ensuring seamless data access and storage
- Data Scientist Rowad Modern Engineering (Mar 2024 - Jul 2024)
  - Developed machine learning models for cash flow predictions
- Senior Data Engineer Rowad Modern Engineering (Apr 2023 – Dec 2023)
  - Automated repetitive tasks using Python, saving significant resource hours

#### Construction and Civil Engineering Experience

- Project Control Section Head Rowad Modern Engineering (Sep 2021 – May 2023)
  - Managed the project control team for bridge projects
  - Streamlined cost and schedule reporting pro-
  - Enhanced coordination between construction and planning teams
- Senior Project Control Engineer Rowad Modern Engineering (Jan 2019 – Aug 2021)
  - Oversaw multiple project schedules and cost control measures
  - Delivered periodic project performance reports to stakeholders

# Construction and Civil Engineering Experience (cont.)

- Project Control Engineer Rowad Modern Engineering (Apr 2018 Dec 2018)
  - Worked on major infrastructure projects including Nefisha Bridge and El Sokhna Tunnel
- **Tendering Engineer** Rowad Modern Engineering (Jan 2018 Mar 2018)
  - Evaluated project tenders for technical and financial feasibility
- Planning/Cost Control Engineer Concrete Plus (Apr 2015 – Jan 2018)
  - Coordinated cost control for multiple projects from the head office
- Site Engineer Concrete Plus (Apr 2014 Mar 2015)
  - Supervised on-site construction activities, ensuring compliance with design specifications

## TECHNICAL PROJECTS

## **Data Engineering Pipeline**

- Developed automated data pipelines for cash flow analysis using Apache Airflow
- Implemented real-time messaging integration with Teams and WhatsApp
- Built custom ETL processes for financial data processing

#### Machine Learning Projects

- Created stock price prediction models using time series analysis
- Developed rainfall prediction model for construction planning
- Implemented CDL (Construction Data Library) model for project analytics

#### KEY SKILLS

#### Technical Skills

- Data Engineering: ETL pipelines, Airflow, Spark, ERP systems, Docker
- Data Visualization: Power BI, Looker, Tableau, Python visualization libraries
- **Programming:** Python, SQL, Java, R, C++, C# (familiar)

#### **Domain Expertise**

- Engineering Tools: Primavera P6, MS Project, Synchro, Revit, Navisworks, AutoCAD
- Construction: Cost Control, Tender Evaluation, Risk Management
- Languages: Arabic (Native), English (Fluent)

## CERTIFICATIONS

- Certified Data Scientist Professional (Epsilon AI)
- Primavera P6
- Python Programming
- PMP Certification
- CCNA and CCNP Networking
- Steel Bridges Design

## PERSONAL PROJECTS

- Guitarist in an Iron Maiden cover band
- Created a music YouTube channel with over 100,000 subscribers
- Co-created the social media group ESS
- Co-hosted a political podcast
- Wrote two sci-fi novels
- Worked in the rescue of street cats and dogs in Maadi