

# Zakaria El Arwadi

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## Summary of Qualifications

- Computer Science graduate with strong foundations in data analytics and software development. Hands-on experience using SQL, Python, and BI tools to build data pipelines, dashboards, and analytical models, alongside experience developing full-stack and AI-powered applications.
- Skilled in data preparation, validation, automation, and system design, with the ability to translate complex technical results into actionable insights for non-technical stakeholders. Comfortable working across the data-software boundary in research, analytics, and product-oriented environments.

## TECHNICAL SKILLS

### Data & Analytics

- SQL (Oracle, MySQL), Python (pandas, NumPy, scikit-learn)
- Power BI, Tableau, Qlik, Excel (Advanced), Sigma
- ETL pipelines, data validation, KPI analysis, dashboards

### Software Development

- JavaScript, React, Node.js, Express, Flask, Python
- REST APIs, authentication (JWT), system integration
- Git, CI/CD, Docker, Agile/Scrum

### Geospatial & Research

- QGIS, ArcGIS (familiar), spatial joins, geospatial analysis
- Quantitative & qualitative measurement, reporting

### Professional Skills

- Analytical thinking, attention to detail
- Technical communication, storytelling with data
- Cross-functional collaboration

## EDUCATION

**Bachelor of Science (BSc):** Computer Science, Toronto Metropolitan University Sept 2020 - 2024 • **Relevant Coursework:** Data Structures & Algorithms, Database Systems, Data Science, Artificial Intelligence, Software Engineering, Web Development, Computer Networks  
• **Capstone Project:** Developed a machine-learning pipeline for cyber threat detection and visualization using Python and SQL, integrating data ingestion, transformation, and analysis workflows.  
• **GPA (Last 2 Years):** 3.48

## PROJECTS

### Battleship Game (Single-Player AI & Multiplayer) | React, JavaScript

- Developed a Battleship game with AI opponent and browser-based multiplayer gameplay.
- Implemented synchronized multiplayer start logic and turn-based state management, ensuring consistent gameplay flow.
- Delivered a stable interactive experience handling hits, misses, and win conditions across game modes.

### Applied Data Analytics & Business Intelligence (Olympics Dataset)

#### Independent Project | Python, SQL, Power BI

- Analyzed Olympic Games data to identify country performance trends, medal distribution, and participation patterns.
- Cleaned and validated athlete and medal datasets using Python, improving data quality and analytical reliability.
- Designed SQL tables and queries to enable efficient aggregation by year, sport, and country.
- Built interactive Power BI dashboards with KPIs and filters, automating reporting and improving insight accessibility.

### TMU Classifieds – Digital Marketplace Platform | JavaScript, React, Node.js, Express, MongoDB, HTML/CSS

Toronto Metropolitan University | Apr 2024 – May 2024

Live Demo: <https://tmu-classifieds-1d1f.vercel.app/>

- Collaborated in a 5-member Agile team to design and enhance a digital marketplace platform for student classifieds.
- Implemented secure user account management, advanced search functionality, and interactive ad-posting workflows to improve usability and engagement.
- Developed admin dashboards and comprehensive user documentation, streamlining platform management and onboarding.
- Authored a technical setup guide using Node.js and npm, enabling easier deployment and configuration while improving security and maintainability.