

OMAR ASHRAF

Data Scientist & Artificial Intelligence Engineer

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PROFESSIONAL SUMMARY

Data Science & AI student at Zewail City building applied ML and information retrieval systems — including a multi-model search engine (BM25, TF-IDF, RM3, ELMo) with live relevance feedback and automated precision/recall/F1 evaluation.

Comfortable across the full stack: data pipelines, model integration, and the interfaces that expose them.

PROJECTS

DashForge — Open Source Python Library for Interactive Dashboards | *Solo Developer* | July 2026 – Present | [PyPI](#) · [GitHub](#)

- Designed and published a pure-Python library that converts Plotly figures into a full interactive dashboard in a few lines of code, with no HTML/CSS/JS required — eliminating the callback and layout-tree overhead of full dashboard frameworks.
- Shipped to PyPI with themes, KPI cards, a dataset viewer, and customizable layouts; reached 660 downloads and 6 GitHub stars within the first month of release.
- Reached #1 trending post in r/dataanalysis (35K views, 85 upvotes, 96 shares), driving early adoption and community feedback.

IntelliSearch — Full-Stack Information Retrieval Search Engine | *Lead Developer, 2-person team* | Spring 2026

- Architected and built the full-stack system end-to-end (Angular frontend, Flask backend, web scraping pipeline, feedback/scoring persistence), integrating six retrieval models (BM25, TF-IDF, RM3, cosine similarity, N-gram, ELMo) into a unified live-search API with 5 endpoints.
- Designed a feedback loop where user relevance votes are persisted to JSON and used to compute per-model precision, recall, and F1 in real time, dynamically re-ranking model performance in the UI.
- Directed task distribution and delivery across the team, integrating a teammate's standalone model implementations into the production system.

eBay Scraper & Visual Analytics Desktop App | *Solo Developer* | Spring 2025

- Built a full interactive desktop application in Python (Tkinter) for live eBay scraping and analysis, combining Selenium/SerpAPI-based data collection with a custom GUI for real-time item and seller inspection.
 - Implemented seven distinct data visualizations (price/shipping correlation, 3D comparison plots, geographic delivery heatmaps, NetworkX similarity graphs, rating distributions) to surface pricing and seller patterns from live scraped data.
 - Added a built-in image-editing module (grayscale, brightness, edge detection, negative filters) using OpenCV/PIL, extending the tool beyond data analysis into applied computer vision basics.
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EXPERIENCE

Junior Teaching Assistant — Data Acquisition (ETL) | *Zewail City* | Jan 2026 – May 2026

- Supported 100+ enrolled students in a Data Acquisition (ETL) course covering web scraping (BeautifulSoup, Selenium), API usage, and data visualization (matplotlib, NetworkX), running weekly 3-hour lab sessions and providing 1-on-1 debugging help to 20+ students.
 - Assisted in evaluating student projects and quizzes alongside course TAs, providing technical feedback and grading input.
 - Achieved a 4.8/5 average student satisfaction rating (17 respondents) across responsiveness, technical support, and clarity — with recurring feedback specifically praising hands-on help with Selenium and debugging.
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EDUCATION CGPA: 3.50/4.00

B.Sc. in Data Science & Artificial Intelligence | *Zewail City of Science, Technology and Innovation* | Expected 2028

TOOLS

Python, C++, SQL, scikit-learn, TensorFlow, Pandas, NumPy, Matplotlib, Plotly, Dash, NetworkX, Angular, TypeScript, HTML/CSS, Selenium, BeautifulSoup, OpenCV, Flask, Git, Jupyter