

Mohammad Eissa

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Data Science student who builds and ships ML and AI systems: a carbon-credit valuation engine at List4Free, autonomous agents at Deloitte, and computer-vision and time-series forecasting research at WPI. Seeking full-time data science, ML, or AI roles (available May 2027).

Education

Worcester Polytechnic Institute

B.S. in Data Science — GPA: 3.8

Worcester, MA

Expected May 2027

Coursework: Data Science, Machine Learning, Data Structures & Algorithms, Probability & Statistics, Linear Algebra

Experience

List4Free LTD

Quantitative Research Analyst & Product Lead

Remote

Sept 2025 – Present

- Architected a valuation framework that quantifies carbon-credit value from energy-efficiency (EPC) data at the individual-property level, designed to scale across 20M+ UK residential records.
- Designed scalable data workflows converting property-level inputs into standardized financial and environmental valuation outputs; built pipelines integrating EPC scores, carbon-price signals, and valuation sensitivity analysis.
- Developed degradation, validation, and audit-ready logic so estimates stay defensible under UK EPC regulation and carbon-credit / green-bond frameworks; led system architecture and quantitative design with company leadership.
- Translate model outputs into investor-facing reports and dashboards; contribute to commercialization strategy as a shareholder.

Deloitte

AI & Data Intern

Cairo, Egypt

May 2026 – Aug 2026

- Built an autonomous AI agent end to end that plans tasks, calls tools, and executes multi-step workflows without human intervention, translating business requirements into a working system.
- Led development of an AI-powered résumé-screening platform for Deloitte Egypt HR: NLP-based extraction of candidate attributes and a structured, explainable scoring method built from recruitment criteria.
- Mentored intern teams across Deloitte's six-project Bridge Program on problem structuring, design, and shipping software.

Haioku Group

Student Consultant – Urban Sustainability & Data Strategy

Kobe, Japan

Mar 2026 – May 2026

- Analyzed government housing, demographic, geographic, and real-estate data alongside field research and stakeholder interviews to identify operational risks and expansion opportunities in the reuse of abandoned properties in Kobe.
- Built a decision-support platform mapping candidate properties and scoring investment fit, renovation risk, and community impact; presented data-driven recommendations to company leadership.

Research

Worcester Polytechnic Institute

Computer Vision Researcher — Swimming Systems (Prof. Wei Xiao)

Worcester, MA

Sept 2025 – Present

- Develop detection, segmentation, and motion-tracking pipelines (YOLO, OpenCV: lane-line detection, body segmentation, temporal tracking) that turn underwater footage into velocity, stroke-rate, distance-per-stroke, and efficiency metrics.
- Evaluate and debug YOLO-based models with emphasis on robustness and failure-mode analysis; document architecture, methodology, and data-processing logic for reproducibility toward a manuscript in progress.

Worcester Polytechnic Institute

AI Modeling Researcher — Energy Systems (Prof. Adam Powell)

Worcester, MA

Nov 2025 – Present

- Build an electricity-price forecasting model integrating NVIDIA FourCastNet-3 weather outputs, ISO market APIs, and plant operations data to project prices up to three months ahead; test robustness under volatile market conditions.
- Translate probabilistic forecasts into threshold-based run/idle control logic for an energy-intensive metals plant; Monte Carlo and time-series modeling quantify uncertainty in plant ROI and avoid inefficient stop-start cycles.

SNAP Lab, Worcester Polytechnic Institute

Data Modeling Researcher — Social Neuroscience

Worcester, MA

Jan 2026 – Mar 2026

- Processed and validated EEG, behavioral, and survey data for 20+ subjects into analysis-ready multimodal pipelines.
- Built regression models linking EEG features to attention, fatigue, and emotion-regulation indicators.

Projects

Personal AI Operations System

Self-directed

Claude Code, launchd, MCP, Ollama

June 2026 – Present

- Run 15+ scheduled, unattended Claude Code jobs that write daily product-idea briefs, improve three business prototypes on a four-times-daily autopilot cycle, and run a daily QA and defensive-security pass across all projects.
- Built the engine behind them (git snapshot, headless run, verification, log) and a worktree fan-out CLI for parallel agent sessions.

Skills

ML & Statistics: Supervised/unsupervised learning, time-series forecasting, NLP, computer vision, Monte Carlo simulation, A/B testing, feature engineering, model evaluation

Programming: Python (NumPy, pandas, scikit-learn, SciPy, OpenCV), SQL, C++, TypeScript (React), Git, Linux

AI Tooling & Data: Claude Code, MCP servers, agent orchestration, prompt engineering, Ollama, Power BI, Tableau

Leadership: NCAA Varsity Swimmer (GLVC Champion 2024); WPI Data Science Club, Investing Club