Mostafa Abuzahra

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Education

German International University Sep. 2022 – Jun. 2026
Bachelor of Science in Computer Science *New Administrative Capital, Egypt*
1.57 German GPA - 3.6 GPA ECTS
— Recipient of the **DAAD Excellence Award** for outstanding academic performance

Certifications

AWS Certified Cloud Practitioner May 2025
Amazon Web Services

Technical Skills

Languages: Python, Java, C, C++, SQL/noSQL, TypeScript, JavaScript, GO

ML/DL: Scikit-learn, TensorFlow, PyTorch, Pandas, NumPy, OpenCV

Web Dev: Node.js, React.js, Express, Next.js, Nest.js

Databases: MongoDB, MySQL, PostgreSQL

Tools: AWS, Docker, Kubernetes, Linux, Git, GitHub, VS Code, Jupyter, Power BI

Visualization: Matplotlib, Seaborn, Tableau

Experience

AutoPulse Aug. 2025 – Present
Full-Stack - AI Engineer (Full-time) *Cairo, Egypt*
— Co-built an internal CRM system covering customer onboarding, ticketing, and pipeline tracking.
— Designed and developed the public landing page end-to-end (information architecture, UI, deployment).
— Developing a chatbot and AI features for the mobile application to enable self-service and intelligent insights.

Cloud Engineer Intern Jul. 2025 – Sept. 2025
Mideast Communication Systems *Cairo, Egypt*
— Enhanced an open-source application, dockerized it, and deployed on AWS.

Database Administrator Intern Aug. 2024 – Sep. 2024
National Bank of Kuwait *Cairo, Egypt*
— Optimized query performance by 15% through indexing strategies; Monitored DR server performance using Tableau

Research & Publications

Talent Vision AI: Data-Driven Football Scouting Framework *Accepted, In Press*
— Co-authored research applying DBSCAN clustering and visual analytics for professional football scouting
— Engineered an end-to-end data pipeline with web scraping and interactive dashboards featuring radar charts for actionable insights

Projects

Wellness360 – Full-Stack Fitness Tracker *Next.js, NestJS, MongoDB, Docker* Jun. 2025
— Engineered a full-stack fitness platform (Next.js/NestJS) featuring a Gemini AI chatbot for personalized recommendations, secured with Google OAuth, and deployed via a Dockerized CI/CD pipeline.

AWS Task Manager *AWS CDK, Next.js, TypeScript* May 2025
— Architected a serverless backend with AWS CDK; Integrated RDS, Lambda, API Gateway, S3, Cognito, and SQS
— Crafted a responsive Next.js frontend with secure authentication and scalable task management features

Sports AI Platform *Python, FastAPI, React, Chart.js* AI League Hackathon, Apr. 2025
— Implemented a FastAPI backend featuring clustering algorithms (DBSCAN, GMM, K-Means) for player performance analysis
— Designed React frontend with interactive visualizations for cross-league performance analytics

Semi-Supervised Heart Disease Prediction *Python, Scikit-learn* Mar. 2025
— Devised clustering algorithms for label inference; Trained ensemble models achieving 92% accuracy
— Conducted comprehensive EDA and feature engineering to maximize predictive performance

Olympics Data Visualization *Power BI, DAX* Dec. 2024
— Integrated Paris 2024 datasets; Created interactive dashboards with advanced DAX measures and slicers

Database Query Optimization *PostgreSQL, pgAdmin* Dec. 2024
— Enhanced 24 complex queries with strategic indexing, boosting performance by up to 40%