Adham Mohamed Nabih *Data science student*

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📍 Alexandria   🏳 Egypt

in LinkedIn   ⭘ GitHub

📊 Codeforces

Profile

An aspiring data scientist with a strong foundation in statistical analysis, machine learning, and data visualization, currently pursuing a bachelor's degree in **computer and data science** at Alexandria University.

Professional Experience

2024/10 Alexandria, Egypt	**Trainee** *Digital Egypt Pioneers Initiative - DEPI* • Developed strong expertise in data science by mastering Python and SQL, solving over 20 SQL problems on LeetCode and tackling advanced Python challenges, improving problem-solving efficiency by 30% • Gained hands-on experience in career planning, CV writing, freelancing strategies, and portfolio development, positioning myself for success in the tech industry.
2024/08 – 2024/09	**Front-end development (Angular)** *Faculty of Computer and Data Science* • Completed a 30-hour intensive web development program in the summer of 2024, gaining proficiency in designing and building dynamic, responsive web applications. • Acquired hands-on experience with key technologies, including [html-css-javascript-bootstrap], and applied them to create 25 functional projects that addressed real-world challenges.
2022 – 2023	**Volunteer** *HackerRank* • Volunteered as an HR Specialist with the HackerRank team at my university, organizing 2 events that resulted in a 40% increase in student engagement. • Streamlined team operations and applied recruitment strategies, boosting student involvement in tech-related initiatives by 55%. • Fostered a collaborative, inclusive environment by working closely with faculty and peers, leading to a stronger sense of community and participation.

Education

2022 – 2026 Alexandria, Egypt	**Data Science** *University of Alexandria Faculty of Computer and Data Science* **GPA: 3.25**

Skills

Data Science
Collection, Preprocessing, Visualization, Analytics

Object-Oriented Programming (OOP)
Well-versed in various data structures and their applications

Database Management
Proficient in SQL and MySQL for data manipulation and storage

Web Scraping and Automation
Skilled in web scraping using Beautiful Soup and Selenium for data extraction and automation tasks.

Artificial Intelligence
AI algorithms and optimization techniques : search, optimization and probabilistic models

Programming Languages
Proficient in C++, Java, and Python

problem-solving
Adept at solving complex problems using C++ and Python on platforms like Codeforces, focusing on graph algorithms, mathematical challenges, greedy methods and combinatorics.

Mathematics and Statistics
Linear Algebra, Advanced Calculus: Series and Sequences, Partial Differentiation, Multiple Integration, Line Integrals, Green's Theorem,Probability and Distributions,Statistical Methods: Hypothesis Testing, Confidence Intervals, Parameter Estimation,Stochastic Processes: Markov Models (Discrete and Continuous)

Machine learning
unsupervised and supervised models

Languages

- Arabic
- English

Certificates

- Machine Learning: Regression
- Regression Analysis: Simplify Complex Data Relationships

Projects

Income evaluation ⊡
machine learning classification models
This project aimed to build a predictive model using census data to classify individuals into income categories ($\leq$$50K or >$50K). Models used included KNN, Naive Bayes, Decision Tree, Random Forest, and SVM. Extensive preprocessing, feature engineering, and visualization were done using Python libraries like Scikit-learn, Pandas, NumPy, Matplotlib, and Seaborn. The approach ensured accurate classification through robust analysis and modeling.

Car Price Prediction Regression Model ⊡
In this project, I developed a regression model to predict car prices based on features like engine size, curb weight, and MPG. The dataset was cleaned, significant features were selected, and models including linear, ridge, and lasso regression were executed. Model performance was evaluated using metrics like MSE and R^2, with visualizations (e.g., partial dependence plots) enhancing interpretability. Insights highlighted the influence of specific features on pricing, offering potential for improved automotive pricing strategies. This project honed my skills in data analysis, machine learning, and visualization, paving the way for future advancements in predictive modeling.

Implementation of Gradient Descent and Cost Function for Linear Regression in C++ (From Scratch) ⊡

Graph theory algorithms ⊡
- In this project, I implemented fundamental and advanced graph algorithms, including DFS, BFS, Dijkstra, Bellman-Ford, and Floyd-Warshall for traversal and shortest path finding. It also includes Kruskal's algorithm for minimum spanning trees and cycle detection in directed and undirected graphs. Union-Find (disjoint-set) and graph utility functions like degree calculation and printing are integrated. The project provides a comprehensive toolkit for solving graph-related problems in competitive programming and system design. Skills used include C++, STL, data structures, algorithms, and graph theory.

Analyzing Walmart's Promotional Impact During Holidays
This study analyzes Walmart's holiday promotional strategies, focusing on markdowns' impact on sales and consumer behavior. It provides insights for retailers to enhance marketing efforts using data analysis, machine learning, and visualization tools.

Passion for

Competitive Programming
I enjoy participating in problem-solving competitions and actively work on challenges on Codeforces and LeetCode.

Interests
- **continuous learning** drives me to seek new knowledge and grow both personally and professionally, embracing challenges as opportunities to expand my skill set.
- **collaboration** fuels my enthusiasm for working with diverse teams, where open communication and mutual support lead to shared success.
- **problem-solving** motivates me to tackle complex issues with a combination of creativity and logic, always striving for efficient and innovative solutions.
- **technology** keeps me engaged with emerging trends in data science and web development, constantly exploring how these innovations can address real-world challenges.
- **excellence** compels me to deliver high-quality work with attention to detail, ensuring results that make a meaningful impact.