# Mohamed Wael ElTeir

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## Summary

Motivated Computer Science student with a solid foundation in algorithms, data structures, and software design. Proficient in Node.js and multiple programming languages, including C++, Python, and Java. Passionate about problem solving, clean code practices, and delivering high-quality projects. Proven track record in competitive programming with two-time participation in the ECPC. Committed to continuous learning and staying up-to-date with industry trends to build reliable and efficient software solutions.

## Education

**Alexandria University**                                             **September 2021 – May 2025**
*Bachelor of Science in Computer Science*                                         *CGPA: 3.57*

**Saint Marc College**                                                 **May 2007 – August 2021**
*Diploma*

## Professional Training

**Coach Academy Level 2 | ⊕**                                   **April 2024 – October 2024**
*Competitive Programming*

- Participated in a 6-month training program focusing on competitive programming and problem-solving.
- Learned topics such as STLs, Static range queries, Backtracking, Two Pointers, Sliding Window, Searching Algorithms, Bit Manipulations & Masks.
- This level helped in achieving a 1100+ rating on Codeforces.

**Information Technology Institute (ITI)**                      **August 2024 – September 2024**
*Open Source Development track*

- Engaged in a 6-week training program centered on open-source development and software engineering principles.
- Developed a strong foundation in software engineering and open-source development.

## Relevant Coursework

- Data Structures
- Software Methodology
- Algorithms Analysis
- Database Management
- Artificial Intelligence
- Internet Technology
- Systems Programming
- Computer Architecture

## Technical Skills

**Languages**: JavaScript, C#, Java, C++, GO, Python, TypeScript, Julia
**Technologies/Frameworks**: Express.js, ASP.NET, xUnit.NET, Jenkins, Jira, Docker, Git, GitHub, Postman
**Programming Concepts**: Object-Oriented Design and Programming, Data Structures, Algorithms
**Database Management Systems**: MS SQL, MySQL

## Experience

**Upwork**                                                           **August 2019 – March 2020**
*Software Developer Freelancer*                                                       *Remote*

- Designed and implemented 5 websites for 2 clients, which continue to be actively used.
- Assisted clients with enhancing their existing websites by integrating new features. This resulted in an increase in user engagement.

## Projects

**AdminKeyAPI | *.NET 8* | ⬤ GitHub**                                          **August 2024**

- Developed an API for managing users and their posts, as it uses JWT for authentication and authorization, and route versioning for future upscaling.
- Integrated CORS support for both development and production environments to facilitate cross-origin communication, and fully documented the API using Swagger.
- The API uses Output Caching with different configurations, depending on which CORS policy being used, to match any business needs and improve performance by reducing the load on the database.
- Followed SOLID principles like Singleton Principle, Dependency Injection, and Repository Pattern to ensure the codebase is maintainable and scalable.
- Used stored procedures and triggers to ensure data integrity and enforce business rules.

**University Grades Notifier API** | *Express.js* **June 2024**
- Developed a sophisticated API to authenticate users and retrieve grade data from the university portal and sending it in a push notification. This initiative reduced the need for manual grade updates, saving approximately 15 hours.

**Mini Search Engine** | *Python* | ⚙ GitHub **April 2024**
- Created a basic search engine capable of processing and ranking documents based on relevance metrics such as Cosine-Similarity, Jaccard-Similarity, and others. With ranking accuracy of 83%.
- Enhanced the search engine's responsiveness and accuracy by implementing Likelihood Models, which improved the quality of search results by 2.5 times.

**Turing Machine Simulator** | *C++* | ⚙ GitHub **October 2023**
- Created a console-based Turing Machine simulator for a Theory of Computation course, accurately emulating the behavior of a real Turing Machine. The performance of the simulator was optimized by 30% using efficient algorithms.
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## Achievements

**Egyptian Collegiate Programming Contest (ECPC)** | ⊕ **2023, 2024**
*Contestant*
- Twice finalist in regional qualifications contests, solving a wide range of complex algorithmic challenges. With the highest rank of 53rd in the 2024 contest.

**Meta Hacker Cup** | ⊕ **2024**
*Contestant*
- Progressed to the first round of the competition, competing against the top 25,000 participants worldwide.

**IEEE AlexSB** **2024**
*Contestant*
- Participated in the IEEE AlexSB Programming Contest, solving a series of algorithmic challenges in a timed environment.

## Volunteer Experience

**HackerRank Campus Club, AUFS** | ⊕ **January 2024 – October 2024**
*Head of the Backend track* *Alexandria University*
- Served as the head and instructor for the back-end track, utilizing the .NET framework to teach and mentor students.
- Led a highly productive team that successfully completed multiple projects and significantly improved post-campus performance.
- Managed the executive board of 5 members, conducting weekly meetings to monitor and drive progress in key areas.
- Directed a chapter of over 20 members, focusing on community service, teamwork, creativity, academic excellence, and mentorship.