Mohamed Harby

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Experienced developer with a Bachelor's degree in Computer Engineering from Tanta University. Proficient in Java, Python, C++, JavaScript, and SQL. Skilled in building enterprise-scale Java applications and developing full-stack web apps using ReactJS and Django. Strong background in data structures, algorithms, and software engineering. Gained valuable professional experience through internships as a Java Developer Intern at Job Hacker, Egypt, and as a Remote Software Engineering intern at bld.ai. Achieved impressive rankings in renowned ICPC programming contests, showcasing my competitive programming skills and ability to thrive under pressure. Committed to delivering high-quality software solutions and passionate about innovative development projects.

Education

- **Tanta University** — Tanta, Egypt
  Computer Engineering and Automatic Control ; 75.7% — *2018 - 2023*
  - **Courses:** discrete mathematics, data structures and algorithms, compilers, database systems, software engineering practices, artificial intelligence, operating systems, networking, distributed systems, security, e-commerce, and information systems.
  - **Projects:** hospital management system, Bookmate (e-commerce web app), 0-1 knapsack problem solution using genetic algorithms, ai recommendation system.
- **Higher Secondary School** — Tanta, Egypt
  Grade: 97.8% (401/410) — *2015 - 2018*

Experience

- **Job Hacker** — Egypt
  Java Developer Intern — *Apr. 2023 - Present*
  - As a Java Developer Intern at Job Hacker, I am equipped with the skills to build enterprise-scale Java applications. I have gained proficiency in object-oriented design, Spring Framework, and object-relational mapping (ORMs).
  - During my internship, I have been actively involved in utilizing software engineering tools such as UML diagrams and Git for Java application development. These tools have helped me ensure code quality and collaborate effectively with the development team.
- **bld.ai** — FL, USA
  Remote (Software Engineering Intern - Full-stack Engineer) — *Aug. 2022 - Mar. 2023*
  - As a Software Engineering Intern at bld.ai, I had the opportunity to work as a Full-stack Engineer, developing web applications using ReactJS and Django. This experience allowed me to gain expertise in web architecture and RESTful APIs.
  - Working in a collaborative team environment, I contributed to the delivery of high-quality software products. This experience helped me enhance my problem-solving skills and tackle complex challenges in web development. I actively participated in Agile methodologies, ensuring efficient project management, and utilized version control systems to maintain code integrity.
- **Tanta ICPC training community** — Tanta, Egypt
  Competitive Programming Coach and Contestant — *Sept. 2019 - Apr. 2022*
  - Within the Tanta ICPC training community, I served as a Competitive Programming Coach and Contestant. In this role, I mentored newcomers in data structures and algorithms, helping them develop strong problem-solving skills.
  - Additionally, I actively participated in competitive programming competitions such as the ICPC, and sharpening my own programming abilities. This experience further enhanced my analytical thinking and ability to tackle complex coding challenges.

Projects

- **Openstack@bld.ai** Contributed to Openstack, a tool that simplifies software development by reducing boilerplate code and repetitive patterns. Developed using Django and ReactJS, Openstack allows developers to focus on producing outstanding software by automating common development tasks. Visit openstack

- **BookMate** Participated in developing the frontend part of BookMate, a user-friendly web application for managing personal book collections. Contributed to creating a visually appealing frontend with a minimalist design, emphasizing essential book details. Built using React.js and Redux, enabling seamless book addition, deletion, and PDF downloads. GitHub Link
- **Sorting Visualizer** Developed a C++ application that visualizes common sorting algorithms, including merge sort, quick sort, and insertion sort. The application provides an interactive visualization of the sorting process, aiding in understanding and analyzing the algorithms. Implemented using C++ and SFML library. GitHub Link
- **0-1 Knapsack Problem using Genetic Algorithms** Implemented a solution for the 0-1 Knapsack Problem using Genetic Algorithms, based on a research paper. The project aimed to maximize the benefit of objects in a knapsack without exceeding its capacity. It involved the application of AI techniques and Genetic Algorithms in C++. GitHub Link

Skills Summary

- **Languages:** Java, C++, JavaScript, Python, SQL
- **Software Engineering Tools:** UML diagrams, Git
- **Java Development:** Building enterprise-scale Java applications with OOP design, Servlets, Spring Framework, and ORMs
- **Web Development:** ReactJS, Django, web architecture, and RESTful APIs
- **Agile Methodologies:** Familiar with Agile methodologies for software development
- **Version Control Systems:** Git
- **Data Structures and Algorithms:** Competent in data structures and algorithms, with experience in competitive programming
- **Problem-Solving:** Strong problem-solving skills in complex web challenges
- **Technologies and Frameworks:** Git, React.js, Django, NodeJS, ExpressJS

Accomplishments

- **76th place** in ICPC Egyptian Collegiate Programming Contest out of 2000 teams, 2022
- **8th place** in ICPC ECPC Qualifications Collegiate Programming Contest Day 1 out of 200 teams, 2022
- **63rd place** in ICPC Egyptian Collegiate Programming Contest out of 1400 teams, 2021
- **2nd place** in ICPC Tanta University Collegiate Programming Contest out of 24 teams, 2021

References Available on Request!