

# Omar Elasfar

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EDUCATION

**Bachelor of Science in Computer Science, Software Engineering Stream, Co-op** *Expected 2027*  
*Carleton University* *Ottawa, ON*

- **Major CGPA:** 11.75/12.0 (A)
- **Courses:** Systems Programming, Software Engineering, Operating Systems, Relational Databases, Data Structures & Advanced Algorithms, Object-Oriented Programming, Functional Programming, Discrete Structures
- **Achievements:** Minor in Statistics, Deans' Honour List 2024, Golden Key International Honour Society

## SKILLS

**Languages:** Java, C, Python, JavaScript, SQL, HTML, CSS/SCSS, Haskell, R, VB.NET  
**Technologies:** REST APIs, CRUD, HTTP Requests, Machine Learning (ML)  
**Developer Tools:** Git, Linux (Ubuntu), Bash, SQLite, PowerShell, GitHub, VS Code, IntelliJ, Oracle VM  
**Competencies:** Communication, Creativity, Passion, Collaboration, Problem-Solving, Initiative, Teamwork

## EXPERIENCE

**Computer Science Teaching Assistant** *Sep 2024 – Present*  
*Carleton University* *Ottawa, ON*

- Guided **60+** students in mastering **software engineering** by offering personalized office hours, detailed feedback, and interactive labs, resulting in a **50%** increase in coding proficiency.
- Assisted students in **troubleshooting** and optimizing **Python** codebases through targeted guidance and problem-solving strategies, prompting a **70%** reduction in error rates.

**Android Application Tester/QA Engineer** *Sep 2024 – Present*  
*Qurani* *Remote*

- Conducted rigorous **testing** and **debugging** of an educational **Android app** by performing tests across multiple devices and versions, reporting **15+ bugs** to developers, resulting in improved functionality and reliability.
- Designed and implemented **test cases** by developing **manual** and **automated testing** procedures using **Python frameworks**, increasing test coverage and enhancing the application's overall reliability.

**Freelance Software Engineer** *Apr 2024 – Sep 2024*  
*stockEZ* *Ottawa, ON*

- Designed and delivered a **full stack** inventory **desktop application** by utilizing **Java object-oriented** principles for **back-end** development and **JavaFX** with **CSS** for **front-end**, delivering a robust system and responsive **UI**.
- Integrated **Google API** to fetch and update data dynamically, which improved application functionality.
- Used **Git** and **GitHub** for **version control**, facilitating collaboration and continuous updates of the software.
- Conducted **unit testing** and **debugging** to enhance software reliability, decreasing technical problems by **99%**.

## PROJECTS

**CarMatch AI** | *Python, JavaScript, SQL, Machine Learning, HTML/SCSS* *Ongoing*

- Developed a **web application** to match users with their most suitable car based on their preferences using **artificial intelligence (AI) algorithms** to enhance the recommendation process.
- Developed a Multiple Linear Regression (MLR) statistical model employing **machine learning (ML)** techniques in **Python** to **analyze** user ratings and predict optimal car recommendations based on selected features.
- Scraped and stored real-time car data from various sources using **Python** and **SQL**, ensuring up-to-date data.
- Implemented a **user-friendly interface** using **JavaScript** for seamless interaction and dynamic content display.

**MyPal** | *Python, JavaScript, SQL, REST API, Twilio, Git, HTML/CSS* *Ongoing*

- Founded and developed a **full stack application** to address a consumer need for a text-based reminder software while providing a user-friendly web app using **JavaScript** and **HTML/CSS** for the **front-end**.
- Built a **back-end** using **Python**, integrated **Twilio** service for mobile notifications, and incorporated time, geolocation, and mapping **APIs** to enhance location-based accuracy and improve **user experience**.
- Designed and implemented an **SQL database** to store user information, ensuring enhanced data management.

**Blocked List Data Structure** | *Java* *Jun 2024*

- Designed a new **data structure** using **Java** and complex **algorithms** concepts, successfully implementing core list functionalities such as **add**, **remove**, **set**, and **get** efficiently.
- Achieved a performance improvement of over **50%** in dynamic list operations compared to traditional list implementations by creating optimal **add** and **remove algorithms**.

**Hack-the-Tunnels Hack-a-thon** | *JavaScript, TypeScript, ReactJS, Prisma, Express, Git, HTML/SCSS* *Sep 2023*

- Led a team to transform a basic **website** into a dynamic, user-friendly **web application** by coordinating efforts using **Git** and **GitHub** and implementing advanced features, addressing technical challenges efficiently.
- Secured a **1st-place** finish in the competition by earning a score of **73** points, displaying technical proficiency.