

Ammar Awad

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Experience

Software Engineer eJad *Cairo, Egypt* **03/2022 - Present**

- Optimized BMW's Symphony Products performance in large-scale projects by tuning JVM parameters, wisely choosing the garbage collector, and continuous refactoring, **increasing throughput by 19%** using **Eclipse RCP, Xtend, SWT, and Jface**.
- Built a multi-threaded, simple-designed enterprise code generator that automates the generation of C files from XML files using **Java/Java EE** and Eclipse **SDK**, which helped embedded engineers boost the development time by **30%**.
- Implemented a robust VS Code extension providing code completion and syntax validation for Symphony DSL. Within the first month of release, it received over **300 downloaded**. using **TypeScript, Xtext, and language server protocol**.
- Improved the obfuscation rate of Java binary files by **34%** using **Proguard** to deceive the de-compilation process.
- Managed BMW's Symphony Infrastructure (**CI/CD**) using infrastructure as code (**IoC**) with **Python, ZUUL, Ansible, Bazel, Github**, and **Jenkins** in an **Agile Scrum** workflow, resulting in a resilient workflow and a **15% efficiency increase**.
- Mentored a **team of 4** students on extending the functionality of eJad's code generator through their graduation project.

Software Engineer Egyptian Armed Forces *Sinai, Egypt* **11/2020 - 12/2021**

- Engineered an innovative feature leveraging complex heuristics to **automate** vacation scheduling, ensuring equitable distribution and operational efficiency while conforming to regulatory guidelines; **saved 300+** man-hours annually.
- Optimized unit productivity by revamping and maintaining the unit's website during military service, enhancing information accessibility and communication; increased website traffic by **40%** and reduced inquiries by **25%**.

Member Technical Software Staff Robotech *Cairo, Egypt* **10/2019 - 06/2020**

- Led the control team to develop a reliable, **low latency**, real-time control system with video streaming for a submarine, improving the user experience and producing an easy-to-use User Interface, resulting in a **20% increase** in adoption.
- Refactored the dashboard's control functionalities and sensor monitoring, reducing latency to **1 ms** using Qt C++.

Intern Software Engineer Innovation Hub *Cairo, Egypt* **06/2019 - 09/2019**

- Automated mapping of architecture's maquettes to a 3D grid layout by building a Maquettes Mapper GUI, receiving an average satisfaction rating of **4.7 out of 5** from architects using **Python** and **Qt**.
- Re-introduced the design of the physical interactive maquette board, which decreased the cost by **76%**.

Education

Bachelor of Engineering Ain Shams University *Cairo, Egypt* **09/2015 - 08/2020**

- Major in computer and systems engineering.

Skills

- Java | Python | Kotlin | Spring | Django | QT C++ | SQL | MongoDB | Maven | REST API | Git | React | Shell | Bash | Linux
- Backend | Algorithms | Data Structures | OOP | Design Patterns | SOLID | Unit Testing (JUnit) | CI/CD | TDD | Jenkins | JIRA

Projects

- Finsync**: Creator of an ongoing mobile application directed to automate and revolutionize the way of managing finances on the go (SpringBoot, Hibernate, and React) **(02/2024)**
- Log4j2**: Made occasional contributions to Apache **Log4j**, which is an efficient open-source logging API and backend for Java-based projects (Java and Maven). **(05/2023)**
- Graduation Project**: Designed and built a deep-learning model that converts the source code of Android apps to iOS apps and vice versa using NMT based on Google's **Transformer** model (Python and Keras API). **(09/2020)**
- PongPing**: Developed a table tennis scoring system by processing the match live video (Python and OpenCV). **(05/2020)**
- ASU Racing Team Website**: Implemented auth component with a social login feature using **Angular**, besides Providing a **RESTful API** using **Django** and **relational databases** (Angular, Django, and SQL). **(10/2019)**
- CareHub**: Created a healthcare web app that streamlines patient record management, appointment booking, and healthcare provider discovery (Django, MySQL, HTML5, and CSS3). **(02/2019)**

Publications

- A. Y. Baraka, et al., "**Neural Machine Based Mobile Applications Code Translation**," 2020 2nd Novel Intelligent and Leading Emerging Sciences Conference (NILES), 2020, pp. 302–307, doi:10.1109/NILES50944.2020.9257935.