

PROFESSIONAL PROFILE

Software engineer with demonstrated expertise in location-based, data-mobilization, and back-end systems development utilizing various frameworks and technologies.

EXPERIENCE

- **Amazon.com, Inc.** Toronto, Canada
Software Development Engineer *Jan 2020 - Present*
 - **HTML Toolkit:** [Amazon](#) is an online retail platform that provides several services. Participate in implementation, monitoring, and troubleshooting/bug-fixing of several components of Amazon's Ad-serving service. Utilizing **Java** and **Spring MVC**.
- **Webalo, Inc.** Los Angeles, USA – Alexandria, Egypt
Software Engineer *Jul 2016 - Jan 2020*
 - **HTML Toolkit:** [Webalo](#) provides a platform for no-code mobilization of heterogeneous enterprise data sources. Participate in design and architecture specification of a new HTML-based platform-agnostic UI widget rendering toolkit.
Led a team of engineers to develop and migrate Webalo's User Agent applications to the new toolkit and retire the Java Canvas-based toolkit. Utilizing **Java**, **Angular**, and **Bootstrap**.
 - **Unit & Integration testing:** Spearhead the effort to setup and design system testing framework for developing integration tests.
Utilizing **TestNG** and **Mockito** for module testing and **Selenium** for end-to-end testing.
Automate system build and testing through **Jenkins**.
- **Coptic Academy, NGO** Remote
Part-time Back-end Engineer *May 2017 - Oct 2018*
 - **CPlanner:** Maintain RESTful data-serving back-end for [Coptic Planner mobile](#) app. Responsibilities include REST API extension using **Spring Boot** and Hibernate, deployment to production server and bug troubleshooting/fixing. Optimization of back-end operations and SQL queries.
 - **CMentor:** Setup, design, and implement RESTful back-end for [Coptic Mentor mobile](#) app using **Spring Boot** and Hibernate.
 - **Batch-processor:** Design and implement data batch-processor driven by cron jobs for consuming system data, via optimized SQL queries, and delivering custom notification in **Java** and shell scripts.
- **Google, Inc.** Mountain View, CA
Software Engineering Intern *Aug 2015 - Nov 2015*
 - **Sandlot:** As part of the G-Tech team, integrated sentiment prediction into Google's partners management tool. Responsible for the design and implementation of the new feature using **Python** and **AngularJS**.
- **Wireless Stars, LLC** Indonesia – Egypt
Software Engineer *Oct 2013 - May 2015*
 - **ARTS:** System for road traffic estimation based on user cell-phone data analytics. Building **Android** SDK for location and sensor data collection.
Collaborating with research team on developing production ready algorithms and modules for data processing back-end system using **Java Spring Boot** and data pipeline through Apache Camel.
Responsible for implementation and testing of **Kalman-filter** user speed estimator.
Utilizing [PostGIS](#) to implement spatial queries consumed by various modules of the system.
Implement **Android** app that uses traffic SDK to push data to the back-end and query the system to estimated traffic state. The application was used by business team for demo/presentation and by the research team for system evaluation.
 - **EYE360:** Augmented reality application providing bi-directional user interaction built using **Unity3D** and Qualcomm Vuforia SDK

- **Alexandria University** Alexandria, Egypt
Teaching Assistant *Sep 2012 - Jan 2013*
 - **In Special Scientific Program (SSP):** Teaching Introduction to Databases and Numerical Analysis courses.
- **Innuva, IT** Alexandria, Egypt
Game Developer Trainee *Jul 2011 - Oct 2011*
 - **3D shooting game:** Game design and implementation using **Unity3d** game engine. The game logic is being implemented using JavaScript for Unity3d.

TOOLS & FRAMEWORKS ¹

- **Languages:** Java – Python – TypeScript – SQL
- **Frameworks:** Spring MVC/Boot – Angular 7 – Jenkins – Unity3D – AngularJS (1 & 2) – Android
- **Testing:** TestNG – Selenium – Mockito/PowerMock – Jasmine/Karma

EDUCATION

- **Alexandria University, Faculty of Engineering** Egypt
B.Sc. Computer and Systems Engineering GPA: 3.49 / 4.0 *Sep 2007 – Jul 2012*

CONTINUOUS EDUCATION ²

- **Programming Languages:** Coursera - Washington Uni
- **Introduction to Functional Programming in Scala:** Coursera
- **Applied Cryptography:** Udacity
- **Introduction to Cryptography:** Coursera - Stanford
- **Introduction to Recommender Systems:** Coursera - Uni of Minnesota
- **Algorithms Design and Analysis:** Coursera - Stanford
- **CSMM.102x Machine Learning:** Edx - ColumbiaX
- **CSMM.101x Artificial Intelligence:** Edx - ColumbiaX
- **Introduction to AI for Robotics:** Udacity
- **Machine Learning:** Coursera
- **Coding the Matrix:** Coursera
- **Scalable Machine Learning:** Edx

¹Technologies are listed in decreasing order of experience.

²Certificates are available upon request.