

PROFESSIONAL PROFILE

Senior Software Engineer with more than 10 years of experience in advanced computing technologies and full-stack tech-solutions development.

Proven experience in real-time ad-delivery systems, distributed data-store systems, live music/audio broadcast applications, and location-based & data-mobilization software solutions.

EXPERIENCE

- **Amazon.com, Inc.** Jan 2020 - Present
Software Development Engineer II
 - **Ads Filtering & Eligibility Services:** Designed a globally-accessible Ad Eligibility API that handles hundreds of transactions per second, utilizing API Gateway, Lambda, and DynamoDB GlobalTables to deliver a cross-regional distributed solution.
 - Developing next generation Ads Filtering service using various technologies such as AWS ECS and SQS.
 - **Amazon Music Amp:** [Amp](#) is an infinite-dial digital radio broadcast mobile application. Amp allows users to create a show, go live, play music, and take in call-in guests all with simple flow and within minutes.
 - Lead engineer developing Amp Android app and migrating Amp iOS app to hybrid ReactNative-based architecture with native core components in both iOS Swift and Android Kotlin.
 - Team leader of Creator Studio & Call-in experience full-stack development maintaining iOS/Swift client and backend system using AWS Lambda, Chime APIs, Elastic-Containers on Fargate microservices, and AWS AppSync GraphQL.
 - Led group of engineers to develop iOS Bluetooth/audio solution which was filed as **Patent P78152 - SWITCHING WIRELESS PROFILES IN RESPONSE TO TRIGGER EVENTS**.
 - **Ads Serving Core Engine:** **FenixSPService** is orchestration engine that serves [Sponsored-Products Ads](#) on Amazon.com retail website and mobile app worldwide. **FenixSPService** is a high-throughput low-latency real-time distributed service that delivers curated ads per user.
 - Worked on migration to Native AWS (NAWS) delivering the first proof-of-concept of **FenixSPService** on the public/native offering of AWS ecosystem.
 - Identified +20 technical blockers, led team of engineers to develop simple workaround solutions, and eventually provided a risk-mitigation path for full migration and launch of the service.
 - Launching **FenixSPService** on Native AWS was later featured in [AWS re:Invent 2021 - Under the hood at Amazon Ads](#).
 - Participated in on-call and DevOps rotations; improving pipelines and monitoring to implement best practices of Continuous Integration & Delivery CI/CD.
- **Webalo, Inc.** Jul 2016 - Dec 2019
Software Engineer
 - **HTML Toolkit:** Designed the architecture for 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 TypeScript and Web Components in **Angular 7**, **Bootstrap**, and JavaScript/CSS.
 - **CI/CD:** Automated system build, execution of integration and end-to-end tests, and binaries distribution through using Git Hooks, **Jenkins**, and Shell scripting.
 - **Unit & Integration testing:** Spearheaded the effort to set up and design system testing framework for developing integration tests.
 - Utilizing **TestNG** and **Mockito** for module testing and **Selenium** for end-to-end testing.
- **Google, Inc.** Aug 2015 - Nov 2015
Software Engineering Intern
 - **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**

Oct 2013 - May 2015

Software Engineer

- **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 **Spring Boot** and data pipeline through Apache Camel.
Responsible for implementation and testing of **Kalman-filter** user speed estimator.
Utilized **PostGIS** to implement spatial queries consumed by various modules of the system.
Implemented **Android** app that uses traffic SDK to push data to the back-end and query the system for 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**

Sep 2012 - Jan 2013

Teaching Assistant

- **In Special Scientific Program (SSP)**: Teaching Introduction to Databases and Numerical Analysis courses.

EXPERIENCE AREAS & TOOLS¹

- **Advanced Computing**: Distributed Cloud Computing – Global Geo-separated Data Stores – Distributed Caching – Serverless Architectures
- **Data Protection and Cybersecurity**: DDOS Protection, WAF, and API Authentication Protocols – Cryptology and Data Privacy
- **Tech Business Domains**: E-Commerce and Advertising – Music and Live Broadcast – Digital Data Transformation – Location-based Services – Augment Reality
- **Languages**: Java – Swift – Python – TypeScript – HTML/JavaScript/CSS – SQL
- **Frameworks**: iOS – ReactNative – Spring MVC/Boot – Bootstrap – Angular 7 – Unity3D – Android
- **CI/CD**: CDK– Jenkins – TestNG – Selenium – Mockito/PowerMock – Jasmine/Karma

EDUCATION

- **Alexandria University, Faculty of Engineering**

Sep 2007 – Jul 2012

B.Sc. Computer and Systems Engineering

CONTINUOUS EDUCATION ²

- **Architecture and Developing on AWS**: AWS Hands-on Training
- **DevOps on AWS**: AWS Hands-on Training
- **Security Engineering on AWS**: AWS Hands-on Training
- **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.