

Amr Abed

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Summary

- Extensive knowledge and experience in Mobile, Cloud, and Machine Learning
- Certified AWS and Google Cloud Engineer with long experience using Docker
- Certified Scrum Master and Scrum Product Owner with experience in Agile Software Development
- Skilled, experienced, and passionate about software development using Java, Kotlin, C++, and Python
- Knowledge of Container Cluster Orchestration tools including Kubernetes, Swarm, and Serf
- Familiar with relational (SQL) and object-based (NoSQL) database concepts and platforms
- Experienced in delivering customized products and services to stakeholders from diverse backgrounds
- Capable of working under constrained time and resources and adapting to fast-changing requirements
- Comfortable conveying written and verbal technical information to non-technical audiences
- Enjoy working in a diverse team and learning from others
- Eager to continuously learn new skills and to keep up to date with trending technologies

Technical Skills

Development	Python, Java, Kotlin, Android, C++, C, Swift, JavaScript
Cloud	Amazon Web Services (AWS), Google Cloud Platform (GCP), Docker, Kubernetes
Data & ML	TensorFlow, Keras, Scikit-Learn, Pandas, MLFlow

Certifications and Training

AWS Certified Solutions Architect	Oct 2020
Data Engineering with Google Cloud Professional Certificate	Oct 2020
DeepLearning.AI TensorFlow Developer Professional Certificate	Sep 2020
Google Cloud Certified - Associate Cloud Engineer	July 2020
Certified Scrum Master	June 2020
Certified Scrum Product Owner	June 2020

Relevant Experience

Engineering Manager, <i>Sophi</i>	Nov 2022 – Present
<ul style="list-style-type: none">• Led the engineering team to build the second generation of Paywall products to ensure scalability for a growing customer base• Built a robust machine-learning automation system leveraging MLflow and Amazon EKS• Worked closely with DevOps to significantly reduce operational costs by consolidating multiple single-tenant systems into a single multi-tenant architecture	
Lead Software Engineer, <i>Sophi</i>	Apr 2022 – Nov 2022
<ul style="list-style-type: none">• Lead a team of 3 engineers to redesign the code for Print Laydown Automation• Collaborated with DevOps team to redesign the architecture of different projects	
Senior Software Engineer, Machine Learning, <i>Sophi</i>	Jan 2021 – Apr 2022
<ul style="list-style-type: none">• Designed AWS cloud solutions for deploying and using TensorFlow deep learning models• Created and maintained backend services for ML-based decision-making using Python• Built APIs for users and system admins to communicate with backend services	

Relevant Experience – Contd.

Learning Content Team Lead, RoboGarden

Dec 2018 – Aug 2019

- Created content for a Python Machine Learning course for a continuing education program of a top Canadian university
- Led a team of 6 engineers to deliver contents for 6 different courses

R&D Engineer, National Capital Region Urban Living Lab, Virginia Tech

May 2016 – 2017

- Constructed a Pi-based IoT multi-sensor device for a Smart City project
- Developed a framework for the device to communicate with a remote MySQL server
- Implemented a dashboard using PHP and Plotly.js to display data from the database

R&D Engineer, Hume Center for National Security and Technology, Virginia Tech

Jan – May 2017

- Collaborated with members from Fujitsu to build an SDN-based security solution
- Designed the threat model for testing the security solution using Metasploit
- Implemented a container-based web application as an attack target

R&D Engineer, Hume Center for National Security and Technology, Virginia Tech

Jan 2015 – Dec 2016

- Designed and implemented RHIDS, an intrusion detection system for cloud containers, using Java
- Tested the system using Docker containers deployed on Amazon-AWS EC2 instances
- Assisted in writing a winning proposal for an NSF Industry/University Cooperative Research Center

Software Engineering Intern, Google

May – Aug 2014

- Implemented an Android application using Java powered by Google Visual Search and Google Knowledge Graph APIs
- Added features and fixed bugs for two other Android apps using Google Fit API

R&D Engineer, Magnum Group, Virginia Tech

Feb - May 2013

- Implemented the Docker-EC2 tool using Shell scripting to automate running & testing cloud applications using Docker containers hosted on different instances of the Amazon-AWS EC2
- Maintained and troubleshoot build issues of the SODA-Cloud project (Mobile/Cloud Computing project funded by Siemens) on GitHub and BuildHive using Maven

Instructor, Inform - IBM Authorized Training Center

Jan 2006 – Aug 2010

- Taught C and C++ Programming to more than 150 students from different backgrounds, many of them were from outside the Engineering field

Software Development Engineer, Mentor Graphics

Nov 2007 – Nov 2008

- Studied and analyzed the C-based version of the Spectre2Eldo syntax converter
- Designed and implemented the OO-based syntax converter using C++ Standard Template Library (STL)
- Solved problems related to using a Flex & Bison parser with C++

Education

Ph.D. Computer Engineering, Virginia Tech

Aug 2013 – July 2017

M.S. Computer Engineering, Virginia Tech

Aug 2010 – July 2013

B.S. Computer Engineering, Ain-Shams University

Sep 2000 – June 2005