FADY BARSOUM

EXPERIENCE

Amazon, Ring Mobility Cloud — *Senior Software Engineer*

DEC 2022 - PRESENT (6 MO)

- Drafted, reviewed, and discussed several upcoming Amazon Sidewalk device and functionality proposals with various product and engineering teams
- Redesigned device registration to also support multi-network devices
- Continued to lead Mobility Cloud team and generally acting as an advisor
- Continued Security Certifier work, completing certification of 1 very large application certification (Sidewalk cloud services)
- Drafted a brief proposal on the use of LLMs in dev work in our org and experimented with deploying a HuggingFace model to SageMaker (WIP)

Amazon, Ring Mobility Cloud — *Software Engineer II*

MAR 2021 - NOV 2022 (1.5 YRS)

- Re-designed and re-built an internal system (Java, Golang) for async device communication over Sidewalk, leading migration work
- Supported several new device alpha and beta trials, coordinating with firmware, mobile app, backend, and QA teams
- Continued Security Certifier work, completing 7 more certifications
- Mentored 1 intern and helped lead and coach a team of several developers, including providing promo feedback for 4 current and previous teammates

Amazon, Ring Bots — *Software Engineer II*

SEP 2020 - MAR 2021 (7 MO)

- Co-designed and built a new audio streaming event-processing and API service (Golang) on ECS Fargate to support Ring's Quick Replies feature set
- Implemented various components of the service, including AWS CDK infrastructure and the SIP and (S)RTP streaming components
- Prepared service's metrics scalability for successful Feb 2021 launch
- Service now daily handles peaks of 50k+ TPS of events and 1.6k+ concurrent streams, with minimal operational overhead
- Continued Security Certifier work, completing 3 more certifications

Amazon, Ring Integrations Cloud — *Software Engineer I*

JAN 2019 - AUG 2020 (1.5 YRS)

- Team inherited an existing cloud service (Golang) supporting integrations between Ring's backend and several partners, including Alexa, IFTTT, etc.
- Developed PoCs and laid the groundwork for integrating two new big partners (Amazon Key and Google Assistant)
- Made massive operational and security improvements to the service
- Helped lead a major infrastructure migration seamlessly
- Trained to become a Security Certifier and completed 4 application security certifications for other teams
- Mentored 1 intern and helped onboard 3 other developers

CONTACT

fady.m.barsoum@gmail.com

+1-714-505-0122

LINKS

linkedin.com/in/fadybarsoum

github.com/fadybarsoum

fadybarsoum.github.io

DEV SKILLS

AWS: 4/5 (DynamoDB, ECS, IAM, CDK, CloudWatch, Route53, KMS, CloudFormation, Lambda, etc.)

Java: 4/5

Golang: 4/5

JavaScript/TypeScript: 3/5

Python: 2/5

Alexa Skills: 3/5

FORMAL EDUCATION

Johns Hopkins University — *M.S.E. Computer Science*

SEPT 2016 - DEC 2017 [GPA 3.63]

Courses: Computer Vision, Advanced Network Security, Machine Learning, Algorithms, Practical Cryptographic Systems, Principles of Programming Languages, Big Data

University of California, Irvine — *B.S. Mechanical Engineering*

SEPT 2010 - DEC 2014 [GPA: 3.74]

Minor in Biomedical Engineering. Courses: Digital Control Systems, MicroElectroMechanical Systems (MEMS), Sensory Motor Systems

Amazon, CloudCam Cloud — *Software Engineer I*

JAN - DEC 2018 (1 YRS)

- Made modifications and additions to APIs on the IoT cloud service (Java) supporting the Amazon CloudCam device
- Worked on several new projects, enabling new features for customers
- Developed a 100x faster, user-friendly searching tool based on AWS ElasticSearch for the service's massive logs, soliciting and adding features as requested by various teams

Amazon, Appstore Datalytics — *Software Engineer Intern*

MAY - AUG 2017 (3 MO)

- Developed a new backend data quality analysis Spark application (Scala)
- Integrated it with various AWS services such as S3, Redshift, and CloudWatch
- Tested the application on production-level data pipelines

Applied Medical Resources, Specialty R&D — *Product Development Engineer I*

JUN 2014 - AUG 2016 (2 YRS)

Main Product: Simsei Laparoscopic Trainer - a surgical simulation device designed to help surgeons train their laparoscopy skills and practice procedures before entering the OR.

- Conducted literature research into surgical education/training and adult learning theories, discussed and solicited feedback on our prototypes from surgeons
- Developed, tested, then automated the testing (Java) of several prototype sensors
- Prototyped circuit designs and developed microcontroller (Arduino/C++) firmware
- Coordinated with various teams about aspects and components of the project
- Drafted engineering drawings for several plastic components
- Developed, drafted, and tested Manufacturing Instructions for product assembly

Micro Integrated Devices and System Lab (MIDAS), UC Irvine — *Undergraduate Student Researcher*

FEB 2011 - JUN 2013 (2.5 YRS)

Notable Projects:

- RehabMat: Aided in the development and assembly of large-area, flat, computer-input-devices made with flexible conductive fabrics. Purpose: aid in the rehabilitation of stroke patients. Used in clinical trials at the UCI medical school. Prototype test on Mario game: http://youtu.be/npbwq1gwUYk
- Lab Display Unit: Developed a prototype (HTML5) application and accompanying server to display UCI Smart Labs sensor data on a tablet. Used JQuery and PHP for the client-server communication. UCI Smart Labs: http://goo.gl/dDdHSn

OTHER

Coptic Readings Alexa Skill — *Independent Project*

FEB - MAR 2018

To learn how Alexa skills worked, created and published an Alexa skill (Python) which scrapes a website to fulfill requests and which correctly displays and pronounces non-English Coptic month names.

Startup Weekend, UC Irvine — *Green Grass (1st place winners)*

JAN 2014

Group project: created a working proof-of-concept for a smart irrigation system that would connect to an existing sprinkler system and water based on weather forecasts. Intended to help reduce waste in landscaping and mitigate California's drought. Individual contribution: programmed the web interface component.

Independent Online Coursework

Introduction to Python for Data Science - edx

AUG 2016

Andrew Ng's Machine Learning - Coursera

JUL - SEP 2014
(used MATLAB at the time, no longer available in that format)