Ramin Firoozye

Senior R&D Architect and Technical Manager

SUMMARY

Innovation, R&D Engineering, new product development, and management. Especially interested in opportunities to work on connected device technologies to extend the SimpleIOT open-source IoT platform (https://simpleiot.net).

◉ : **Berkeley, California, United States**

✉ : **raminfiroozye@gmail.com**

🐦 : **raminf** (https://twitter.com/raminf)

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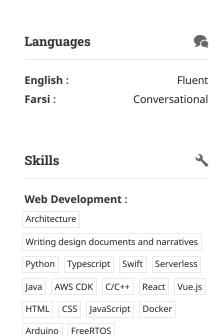
Experience 💼

Jan 2019 – *present*

Senior R&D Architect at Amazon Web Services

SUMMARY

Technical Lead at AWS R&D and Envision Engineering Teams.

- Projects incorporated IoT at large scale, cloud-based robotics, AR/VR, Graph Databases, voice recognition, text to speech, native mobile development, and use of the full range of AWS cloud-based services.
- Created and lead development of SimpleIOT (https://simpleiot.net), a patent-pending serverless platform for creating secure, private, IOT devices.
- Piloted with a number of large industrial customers. Features included end-to-end security, firmware SDKs, MQTT, data anlytics, and integration with AWS AI/ML services.
- Demonstrated support for Augmented Reality real-time integration.
- Released as open-source project in 2022 (https://github.com/awslabs/simpleiot).
- Technologies used included: AWS CDK, Python, Typescript, React, Lambda, DynamoDB, RDS, API Gateway, Cognito, Timestream, Grafana, S3, Cloudfront, Amazon Location, Arduino/C++, and Docker.
- Patent: 'Hierarchical Universal Device Identifier.'
- Customers included: John Deere, Scientific Games/Light and Wonder, Emerson, Discount Tire, Nike, and Fortive. Many more under NDA.

Languages 💬

English : Fluent
Farsi : Conversational

Skills 🔧

Web Development :

Architecture

Writing design documents and narratives

Python   Typescript   Swift   Serverless

Java   AWS CDK   C/C++   React   Vue.js

HTML   CSS   JavaScript   Docker

Arduino   FreeRTOS

Apr 2018 – Jan 2019
Senior Engineer at Amazon Lab126

SUMMARY
Member of Wireless technical team

- Worked on a variety of consumer-oriented connected devices including Alexa, FireTV, Fire Tablets, smart home, remote control products, and appliances.
- Technologies included Bluetooth, Zigbee, and Wifi firmware, system architecture, and scalable cloud infrastructure.
- Designed and shipped embedded wireless metric SDK. Integrated into all Alexa, FireTV, and Kindle devices from 2018 forward. Created custom Kibana dashboards for global monitoring of device performance at-scale.
- Deep-dive 'Cause of Error' analysis on product line that unblocked production. Helped implement solution. Device shipped on-time. Estimated sale of 100M+ units.

Jan 2017 – Apr 2018
CTO/Co-founder at Fluid Hardware

SUMMARY
Secure Firmware Update on the cloud

- Designed and developed an automated, secure over-the-air firmware update system. Support for ARM processor and update via BLE and WiFi. Also included mobile SDKs for iOS and Android.
- Developed SaaS cloud back-end using Python/Django, REST-APIs, and Docker.
- Developed responsive web dashboard using Vue.js.

Jan 2008 – Jan 2017
Technology Consultant at Consultant

SUMMARY
Technology consulting services for companies ranging from startups to multi-nationals

- High-level architecture and design
- Mobile : native apps for iOS and Android.
- Front-end: Responsive web apps using HTML, Javascript, CSS, and Flash.
- Back-end: Python/Django, REST, and Docker.
- Firmware: Bluetooth, BLE, WiFi, and LoRa. Arduino, FreeRTOS on ST, Nordic, TI, and Arduino devices.
- Clients included: Apple, AutoDesk, Earthlink, Ericsson, IBM, Intel, NASA, OneWheel, Oracle, Orange, Procter & Gamble, PG&E, Rockwell Collins, Sony, Taligent, and Toyota.
- Prior experience available on demand.

Education

BA in Software Development, English Literature, and Philosophy/Logic. from Pacific Lutheran University, Tacoma, WA

Interests

Writing :
fiction   non-fiction

Cooking :
fusion   experimental

Electronics :
smart home   connected devices

Video Production :
final cut pro

Aviation :
flying   pilot   private

Baseball :
san francisco giants

Awards

Nov 2021
Patent Pending

SUMMARY
Hierarchical Universal Device Identifier

Jan 2010
AutoPark: MacWorld Best of Show

SUMMARY
Mobile App Development. Simultaneously featured on iOS AppStore front page and several national magazines.

Jan 2019
IoT TFC Member

SUMMARY
AWS Technical Experts Forum.

Dec 2021
AWS Future Manager Program

SUMMARY
Management Training program.