Matthew Serna

SOFTWARE ENGINEER

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SUMMARY

Software engineer with 4+ years experience in software development with experience in complete product development life cycle. Skilled in developing scalable micro services, desktop applications, iOS mobile applications, and CI/CD infrastructure.

EDUCATION

San Francisco State University | Bachelor of Science in Computer Science   *San Francisco, California*
                                                                                                                                                            2012 – 2017

Relevant Coursework: Data Structures, Algorithms, Programming Methodology, Software Development using Android Studio, Machine Structures, Operating Systems, Game Development using Unity, Machine Learning Development

TECHNICAL SKILLS

PROGRAMMING: Python, JavaScript, Swift, PostgreSQL, C, C++, Java, C#, Ruby, Go, BASH scripting, HTML
TOOLS: Amazon Web Services, Git, Docker, XCode, Android Studio, Jenkins, Fastlane, Terraform, Agile development process, Grafana, Postman, Google Cloud Platform

PROFESSIONAL EXPERIENCE

ELEMENT SCIENCE   *San Francisco, California*
Full-Stack Software Engineer   **September 2019-Current**
● Lead development on iOS mobile application to pair with wearable defibrillator, using BLE communication. This included obtaining device metrics such as ECG data, TTI data, device status information and other device metrics and post this data to our cloud services in order to generate medical reports for clinicians.
● Designed and developed a field data extraction tool using Electron/React and Python to extract large ECG datasets from wearable defibrillator devices. The desktop application mitigated failed sent data from mobile application to cloud services.
● Assisted development in transition legacy serverless API REST services to a new container based served architecture ran on AWS ECS service. Services included authentication services, device services, device data services and user management services.
● Assisted development on ECG report generation cloud service to generate medical reports, gathering data from mobile and desktop applications. Utilized multithreading and session management to handle multiple incoming requests. Reports are stored into S3 buckets for the clinical web portal to fetch and display.
● Wrote software architecture design and software design documents for mobile and desktop applications in accordance with FDA submission guidelines
● Created automated build and release pipelines for multiple applications using Jenkins/Bitbucket integration. Developed Terraform scripts for Bitbucket pipeline deployments of cloud software. Deployed Jenkins pipelines for: internal releases, TestFlight releases using Fastlane, code coverage, code complexity builds, and software API documentation.

CISCO | SGG CONSULTING   *San Francisco, California*
Python Engineer   **July 2019 - August 2019**
● Wrote automated integration/regression tests for new Intersight features, which allowed feature developers better test development coverage
● Worked with developers on creating and deploying Intersight features that provided user visibility on servers with invalid/expiring licences, outdated software versions and security breaches
● Participated in feature design reviews in order to help formulate correct automation test plans for new features.

AUTODESK | SGG CONSULTING   *San Francisco, California*
Python Automation Engineer   **June 2018 - June 2019**
● Developed and deployed ETL processes using AWS lambdas, across Autodesk infrastructure teams, storing data into multiple data sources for data visualization using Grafana

- Developed custom Grafana dashboard plugins that helped teams across Autodesk customize and manage data metric visualization.
- Implemented coordinated serverless Step Functions that queried large data sets using AWS Athena and S3 buckets to poll and check how data was being managed for certain teams across Autodesk

VITAL ENTERPRISES   *San Francisco, California*
Software QA Engineer   **November 2017 - April 2018**
- Wrote automation tests for web clients using NodeJS, Puppeteer, and Selenium in order to optimize testing.
- Tested and wrote test protocols for web app and smart glasses integration testing

BLACKFIRE RESEARCH   *San Francisco, California*
Software Engineer | Software/Hardware QA Engineer   **November 2016 - November 2017**
- Developed Windows desktop application utilizing Blackfire proprietary audio driver library, for consumers to use in order to pair, sync and customize different speaker configurations across user homes and offices
- Developed test plans for Blackfire firmware software, allowing firmware developers insight on defect and bugs
- Ran series of load test scenarios to provide developers insight on upper limits of firmware.

INDIVIDUAL PROJECTS/WORK

TabMaker Mobile Application | React Native   **2021**
Mobile application utilizing audio recognition to generate music sheet or tablature

Machine Learning | Coursera   **2019**
Coursework: Linear/Logistic Regression, Regularization, NN, SVM, k-means clustering, recommender systems

SFSU COSE Showcase – 3rd place in Overall Competition   **2017**
For an Android mobile application called SafeZone, which allowed users to alert first responders during emergencies

CSC 631 Final Game Project | PC/Mac   **2017**
Third person Unity game - the main character needs to solve multiple puzzles to get to the final boss.

WRIDR Mobile Application | iOS   **2016**
A social platform mobile application that allowed users to share ride-sharing stories

BookmARker Mobile Application | iOS   **2016**
iOS application utilizing AR technology, Image Recognition, and Text Recognition, to recognize book pages and page numbers to store in collection for tracking bookmarks