Mark Rudolph

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Summary

Self-driven full stack Scala developer who has focused on designing, implementing, and maintaining big features at companies of all sizes. With 10+ years of experience with Linux systems, application development/deployment, and far too much education - I'm a firm believer that if you can dodge a wrench, you can dodge a ball.

Experience

2020-Present
Principal Engineer / Carvana

Carvana is an online car retailer. There, in the Special Projects department, I design and build out backend systems in Scala. One of the most exciting things I've worked on, is help lead our shift to using the ZIO framework, as well as our push to Scala 3.

2019-2020
Senior Software Engineer / Kangarootime

Kangarootime creates leading software for childcare centers and preschools. In my time there, I helped lift, develop, and deploy a new product platform to Kubernetes.

2018-2019
Senior Scala Developer / Blue Orange Digital

Blue Orange Digital is a an integrated full-stack data science agency. In my time there, I helped shore up the infrastructure of a multi-billion dollar hedge fund based in Stamford, Connecticut. I worked to troubleshoot, improve, and document their containerized Scala/Akka micro service platform backed by Kafka/MongoDB/MS SQLServer.

2014-2018
Full Stack Developer / **Vaspian**

Vaspian is a cloud-based VoIP provider located in Buffalo, NY. In my time here, I focused on building and automating platforms that provide advanced analytics and interfaces to our customers, as well as enhanced operational tools for internal service provisioning.

Some of the larger projects I lead while working here include:

In-House Kubernetes

Designed, built, and maintained our own bare-metal Kubernetes cluster for application deployment. Building this all-in-one system has allowed us to more reliably deliver our current applications/services to our customers, promptly roll out new features, as well as offer new services that were intractable to manage before.

Customer Facing Applications

Built and maintained our main customer facing portal, which provided custom reporting and real-time event integration with our core phone system. Using Scala and Akka, along with the Play Framework, we have been able to roll out stable, scalable services that are agile enough to grow with our customers.

Internal Tooling

Built and maintained middleware for maintenance/administration of systems built by our internal Network Engineers which allowed our customer service/support staff to perform more technical tasks such as:

- Dynamically provision custom services for our customers

- Manage and troubleshoot customer configurations

- Monitor customer service status in real time

2011-2014
Scientist/Software Developer / **Sensorcon**

Sensorcon is a developer and manufacturer of environmental sensors located in Williamsville, NY. In my time there, I was part of a small start-up team focusing on bringing products to market from the ground up. My primary focus was working with firmware engineers to write libraries and customer facing applications (iOS, Android, PC) that could talk to our sensor devices via Bluetooth.

Relevant software projects include:

- iOS/Android/Java API library development to integrate with our sensors

- iOS/Android App development

- Internal inventory system to improve our manufacturing capacity

- Automated QA testing protocols and procedures for sensor development, to enable technicians to batch process sensors in a reliable and repeatable manner

- Automated QC testing procedures for production, to promptly identify issues before they reached consumers

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Education

2006-2012
PhD / University at Buffalo

I received my PhD at the State University of New York at Buffalo in Computational Chemistry under Dr. Jochen Autschbach, focusing on optical activity of transition metal complexes.

Miscellaneous

I've made several ZIO based contributions to the popular Rock The JVM blog. Albeit small, I've also made several OSS contributions across the ZIO ecosystem including Caliban, zio-cli, and zio-crypto.

Skills

Scala/3	ZIO	Akka	Kuberenetes / Docker

PostgreSQL / MongoDB / Redis	Pulsar / Kafka / RabbitMQ