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# Seshan Ravikumar

**Languages:** JavaScript/ECMAScript, Python, Java, PHP

**Frameworks/Tools:** Node.js, Deno, React (incl. Redux+other fun stuff), React Native (Expo&CRNA), SQL (PostgreSQL), Redis, Docker/OCI, Scripting/Automation, GNU/Linux and UNIX (BSD) servers, Enterprise networks, Embedded Linux Systems (incl. Raspberry Pi, Arduino/AVR, ESP8266)

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## Experience

### DM&T Services

July 2019 - August 2021

React Native (Xcode, Android Studio), Expo, React Web

- Developed the company's flagship universal iOS/Android React Native **Expo** applications, replacing legacy Xamarin Android and Windows Forms applications.
- Built a configuration utility using **CRNA**, integrating **native iOS+Android libraries**, that configured an embedded Linux system.
- Implemented modern React design principles, frameworks, and tools (ex. **Redux**, Redux Forms, React Router)
- Integrated legacy SOAP backend into modern client-side applications.
- App features including **GPS** fleet tracking, patrol systems for roadside deficiencies, inspections and **real time** collision reporting.

### Education: University of Waterloo - Geomatics, Honours, Co-operative Program

(2020 - Present)

## Projects

### Sineware

Node.js, PostgreSQL, OCI containers, React Native, Linux (kernel + userspace)

- Creating an immutable, automatable **Linux** distribution ([Sineware ProLinux](#)), built with **Buildroot** and custom build scripting.
- Cloud Services backend built on **Node.js** and **PostgreSQL** with a **WebSocket** gateway and **REST API** to provide identity services, orchestrate Linux devices, and accept IoT device messages. Designed with a **microservices** architecture and deployed using **Kubernetes**.
- Client application built in React Native as a universal iOS, Android, Web, and Desktop (**Electron**) app.
- Maintaining on-premises server infrastructure for hosting, including using enterprise-grade networking (Ubiquiti) and servers (x86 and ARM).

### dr. smoothie

Node.js, MS SQL Server, Discord API

- Chat bot application built on the Discord API (WebSockets, REST), and Microsoft SQL Server, deployed in Docker.
- Provides both entertainment features (such as voice chat music/radio), and moderation/administrative tools.

### Hack the North 2018 Winner

Blockchain, Electron, Linux

- Worked in a team of two to create a **blockchain** based (IPFS) service that fetches QEMU snapshots and loads them based on user credentials onto a customized Linux distribution, using an Electron based client app.
- Competed with over 1000 contestants.

### Smoothie (Competitive Programming Platform)

PHP, Containers, Services, React

- Contributed to a **full stack** web app, initially written in **PHP+MySQL**, then migrated to **Spring Boot (Java)** with a React frontend.
- Packaged and deployed various services in **OCI containers (Docker)**.
- Created and maintained build and development infrastructure and workflows (**Jenkins, Docker registry**)
- Setup and maintained **MongoDB** (NoSQL database server).
- Deployed backend and frontend containers into production.