

# Saravana Kumar Vithiyananthan

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## **Career Summary**

- Have been working remote for the past 3 years.
- Currently looking for jobs.
- Founding team of a AI/ML driven startup company ([www.delium.co](http://www.delium.co)) that focusses on automated purchasing in supermarket chains with an aim to optimize inventory (2016-2017).
- Consulted with GoFrugal and a developed WhatsNow, a simple conversational question and answer driven reporting system for retail businesses. Available in PlayStore and AppStore (2015-2016)
- Completed Machine Learning course at Edx.
- Architect at Cognizant Technology Solutions (2012-2015)
- Consultant Developer at Thoughtworks, Chennai for 2 years. Worked on C#. (2011-2012)
- Worked as Senior Associate at Cognizant Technology Solutions from 2003 till 2011
- Engineering majoring in Computer Science by 2003 at Amrita Institute of Technology and Science, Coimbatore.

## **Tech summary**

### **Server**

- Developed webapps with Spring with Hibernate and Jackson
- Fluency in Rails, Node server environments.
- Developed a multi-tenant Rails app that covers authorisation, with complete TDD and custom rake tasks.
- AWS Cli, AWS SDK in Node and Java, Amazon SQS services.
- Introduction to Serverless.io – AWS Lambda and API Gateway, CloudFormation scripts and stacks.
- Node JS backend: express, sequelize, mongodb
- Intermediate experience in Oracle, Sybase and SQL Server Databases.

### **Devops**

- Cloud virtualization – automated droplet control framework using Digital Ocean API's, basic Heroku deployments.
- Virtualization and containers: Ansible(with dynamic inventory discovery), Virtualbox and Docker
- Basic skill in nginx, mitmproxy, strace and other cli tools in Unix environment.

### **Data**

- Python(NLP)
- R - Data.table, Regression and Classification
- Visualisation libraries - Leaflet, D3

### **UI**

- React, Redux with Material UI and Semantic with Webpack
- DEveloped a Cordova App based on React that is deployed to Playstore and AppStore.
- Basic Angular 2.0

### **Management**

- A quick learner with credible analytical and problem solving skills.
- Have been leading teams for the last 10 years.

## Project summary

### 1. Current Consulting(last one month)

- Used Python(libxml) to scrape non standard semi structured HTML tables from US SEC filings. This utilized a Python State machine and hence the structure of the code was simple without any complex conditional statements. The accuracy was tuned to the structure of the SEC filing reports.
- Developed an UI to display leaflet maps with a) Custom pie chart markers b) Custom polygon markers c) Custom lasso selectable regions.
- A NodeJS app to process user registrations with Mongoose as backend. The project involved async job queue for rendering HTML pages in a background PhantomJS worker thread to mail the users a specific report as rendered in the UI.
- A NodeJS app that does Oauth with Heroku and pulls the Heroku data (Read-only) for management reporting.
- Used Serverless.io for deploying AWS Lambda functions with API Gateway and Elasticsearch index add functionality.
- **Worked remote**

### 2. Delium Technologies

- Used **R(Data.table)** to arrive at the optimal holding quantity for any given item, taking into consideration the local store dynamics, festive and seasonal trends, time of the month and stock health of the product.
- Used association rules and clustering techniques to develop Basket Analysis and customer persona identification.
- Built a conversational backend with basic NLP using Python Rivescript and NLP Regex parser. Intents and entities will be resolved by the NLP parser.
- Built a conversational UI with React, React Router, Redux and Material UI with intuitive UI controls, custom table component with client side filtering and download as CSV options.
- Automated the provisioning and destroying of droplets in Digital ocean to take care of worker jobs for our platform. The droplets would be triggered automatically, process the jobs for the day and then die out themselves. Droplets were provisioned using Ansible scripts. The droplets are intelligent enough to live along when there is a an error in the processing to help debug and aid manual intervention.
- Wrote an automatic DAG resolver in Python similar to the resolver used in AirFlow. Given a list of jobs like Job(<Input:A,B>, <Output:C>), the utility would printout the 1) sequence in which the jobs will have to be run, and 2) the groups of the jobs that are independent of each other – so that they can be run in parallel across the cores.
- The entire setup was integrated with CI/CD using GoCD.
- In all works described above, TDD was used.
- **Worked remote**

### 3. GoFrugal

- Wrote a React based Hybrid App for Android and iOS. The app used a custom DSL to drive the conversational UI, which was designed to be a simple question and answer system, answering questions like 'What is my sales <today|this month|etc>' and 'What is the profits for SKU' and a couple hundred questions like this.
- Automated UI tests were done using PhantomJS and Cucumber Rspec.

- Wrote a Rails API app for maintaining task domain models. The UI for the same was done in React as a single page app.
- **Worked remote**

#### 4. Thoughtworks

- Worked on a C# app with TDD. This was a desktop app, and used MVVM and MVP design patterns for the UI architecture.

#### 5. Cognizant Technology Solutions

- Developed a web based studio for designing charts using EmberJS. Used D3 to develop custom charts.
- Was responsible for provisioning and maintaining an internal Gitlab server for the project.
- Engineered a javascript execution engine using COM ATL within a custom rules language (which was compiled and executed by the domain code). The Execution engine had clear entry and exit points to offer extension capabilities for the rules languages. The Rules language was used for automating underwriting decisions in the insurance industry.
- Developed a custom test automation framework which would generate the test automation scripts in Javascript and Java (4 different flavours) based on a test specified in a DSL. The generated scripts would be used to test the functionality of different clients which are supposed to show the same functionality. The test framework used XSLT for transformation and Schematron for validating the actual behaviour. This reduced effort in test maintenance.

#### Personal Information

Age : 36 years  
 Sex : Male  
 Languages Known : Tamil, English, and Elementary Hindi.  
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#### Education

<b>Computer Science and Engineering</b>	1999 - 2003 Amrita Institute Of Technology and Science,	Ettimadai, Coimbatore – 641 101
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