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# SHIVANI TRIPATHI

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#### EMPLOYMENT/WORK EXPERIENCE

Senior Technical Associate (Software Development Engineer)

BA Continuum India – Subs of Bank of America Chennai (India) June 2017 - Mar 2019

I have around 2 years of experience working with **Global Mobility-Centralised Resources Tool** Team (part of **GHRT**) in Bank of America.

The Global Mobility team deals with the mobility population in Bank of America. I handled two web applications – IAS Expenses and IAS Taxes. Our applications were initially designed in Struts web framework and JavaScript. I worked on designing and implementing both the applications in Spring Batch Framework (Spring Batch) from scratch and used Angular 6 for Client-side rendering.

My role is briefly summarized below:

- IAS Expenses:
  - Fetching expenses details from third party AIMS System owned by POLARIS Company.
  - When a BOA employee visits any country for work or business, there is some allocated estimated budget by BOA and whatever the employee spends could be less or more than the estimated budget.
  - Fetching these details and calculating assignment details.
  - Making report from actual expenses and estimated expenses.
- IAS Taxes:
  - Every country has different taxes. So, IAS Expense details of the employees were sent to third party company (KPMG) and they calculate the tax report from the expenses and sent back the tax report to BOA.

Used following technologies.

- Advanced Java, Angular 6, TypeScript, HTML5 CSS3.
- Mockito, PowerMock, Jasmine, Karma
- Spring Batch Framework, REST API, Nodejs
- · Jenkins, Jerseys, WinSCP
- SQL

#### **LANGUAGES AND TECHNOLOGIES**

- Languages: C, C++, Java (Advance), Angular Js, React, Python, HTML5, CSS, JavaScript ES6, TypeScript, Bootstrap, PHP
- Unit Testing: Mockito, Power Mock, Jasmine, Karma
- API Development: REST APIs in Spring, GraphQL
- Operating Systems: Windows, Linux
- · Packages: Eclipse, IntelliJ
- · Version Control: Git
- Interest: Data Structures, Algorithms, Operating Systems, Machine Learning, Data Mining, Embedded Programing and Computer Architecture

### **EDUCATION**

- B. Tech Information Technology from Vellore Institute of Technology (VIT Vellore) with First Class, during year 2013 2017. (Deemed University) (CGPA = 8.41)
- Std. XII from K.N.I.C.E., Sultanpur, CBSE with First class. (75.60%)
- Std. X from K.N.I.C.E., Sultanpur, CBSE with First Class. (CGPA: 9.0)

# **TECHNICAL EXPERIENCE/ADDITIONAL PROJECTS**

• React Powered Web Application for Restaurant (Mar – Aug 2020): I created a React based Single Page Application for the Restaurant. I used JavaScript ES6 for developing React application. I used JSX with React to express react

elements using HTML like syntax. I introduced React strap for Bootstrap 4-based responsive UI design in which I used various components of React strap in my application like Nav Bar, Card etc. I made use of the Card component to display a list of dishes and detailed information. I also made use of the React Component lifecycle. I divided my application into multiple container components like Menu Components, Main Components, Dish detail Component etc. I used react-router to navigate among views of various components. I used Flux architecture and Redux to develop React-Redux powered application. I used REST API for client-server communication.

Technology used: React, React-Redux, Bootstrap, JavaScript ES6, REST API

- IOT-Vehicle Detection for Toll Collection using Raspberry Pi Minicomputer (Jun Nov 2016): Used PIR Motion Sensor and Raspberry PI camera to detect vehicle and generate bill.
   The sensor here operates to activate the camera at a particular distance to universalize the billing algorithm for every category of vehicle. This in turn also ensures the power efficiency of the system because the camera doesn't need to be kept on whole time. The camera used here is a Raspberry-pi installed camera which detects the category of vehicle by calculating the dimension and in turn generate the bill. at Vellore Institute of Technology, Vellore Technology used: Python, Google Firebase, MongoDB, Android Studio
- Web Application of School Management System (Jul Nov 2015): The aim was to develop a School Management
   System that maintains the data of all the students and teachers in database and it provides login portals for student,
   faculty members and student's parent. I used Oracle Database to store information and used Oracle Data Modeler to
   design the database and data modeling. The front end was designed in HTML/CSS and used PHP to connect to
   Database. at Vellore Institute of Technology, Vellore
   Technology used: Oracle SQL Data Modeler and SQL, PHP, HTML, CSS

Implemented K-means Cluster Analysis Algorithm (Sept – Oct 2015): K-means algorithm is implemented in Java. It takes
data from user and form clusters based on given number of clusters required by user. – at Vellore Institute of
Technology, Vellore

Technology used: MATLAB, Java

## **PUBLICATION**

• Cloud with IOT in Smart Parking: The notion of emerging smart cities integrated with internet of things and clouds to make data and service available everywhere helps to create a boon artefact which makes human life very easy. Regarding smart cities flow of data after its generation and its manipulation to get a desired result is most important. This need can be easily fulfilled by the use of Internet of Things with clouds to perform Data Generation and Information Exchange (DGIE). IoT for smart city may include new generation devices such as smart phones, GSM and various sensors along with the available web services such as Google Firebase in order to promote internet-as-a-service. Applications precisely focusing on smart parking system implemented with Internet of Things (IoT), clouds and web services has been proposed in the paper. Further, the system is also designed to create an application for a-priori booking of parking slot to reduce the hassle at parking areas. In addition, a theoretical comparison is presented to show various systems against various metrics.

Publisher: International Journal in Innovative Research in Management, Engineering and Technology Publication URL: https://www.researchgate.net/publication/323253794\_cloud\_with\_loT\_in\_smart\_parking

#### **ADDITIONAL EXPERIENCE**

- **VIT Animation Club** (Aug 2015 Dec 2016): The objective of this club is to promote Animation, foreign and domestic, as a viable art form and to expose the general public to this Art form.
- **GUEST CARE COMMITTEE** (Jan 2015 Jan 2016): Is part of **Riviera** (International Level Cultural Festival of VIT, Vellore) as a Coordinator of the **Guest Care Team**, **Riviera 2016**. This committee is part of cultural and technical fest in college and involves in making posters of events and taking care of visitor's accommodation.
- **Organizer:** Organizing member of Mechnotrix Workshop, a workshop on Mechatronics application focusing on Machine vision.