VIJAYASAI SANAGARAM

FULL STACK DEVELOPER

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Web Resume https://sngrmvj.github.io/VijayasaiResume/#/

EXECUTIVE SUMMARY

Software Engineer with diligence and programming knowledge. Proficient in various platforms, languages and with innate ability to learn and master new technologies. Have experience in the development and maintenance of both frontend and backend and have good knowledge of client and server architecture. I am a person interested in building innovative products and learning innovative software project management techniques.

TOOLS AND TECHNOLOGIES

Programming skills – Data Structures, Docker, AWS, Cloud Foundry, OOPS
Languages – Python, JavaScript, Angular, HTML and CSS
Frameworks – Flask, Django
Tools – Axure RP, JIRA, Git, Visual Studio
Familiar with – Kubernetes, CICD, Influx DB, Grafana

EDUCATION

- Vellore Institute of Technology (VIT University), Vellore
  Bachelor of Technology, Computer Science
  2014 - 2018

WORK EXPERIENCE

✓ **Full Stack Developer**
IBM CIO, Bengaluru, India
May 2021 – Present

- **Network Engineering Compliance Tool**
  1. A tool to fetch the information regarding IBM network servers' patches, security checks, endpoint vulnerabilities, IP address, statistical data. The Tool is divided into three parts. First part is ETL application which extracts data from different data sets, transform the data into required form and load them to DB. Second part is Flask application which responds to the http request from UI by querying the DB. The third part is dashboard developed using Angular, uses the REST API to get the http response and displays it in the dashboard.

✓ **Software Engineer**
Siemens Technology India, Bengaluru, India
July 2018 – May 2021 (2 years 10 months)

- **Bill of Quantities**
  1. Owned the development of the backend for a product called Bill of Quantities. BOQ is for the user to predict domain-specific Bill-of-Quantities of pipes for each powerplant project based on a set of domain-

specific provided attributes and by evaluation of historical data sets (data from already existing powerplants).

2. It helps powerplant engineers in providing an accurate high-level estimate of the materials required to set up a power plant from scratch and the required cost for all the different pipes. Sales people also use this during the procurement of the project.
3. Application uses REST API architecture and Agile methodology as software development life cycle.

Key Achievements -

1. Managed the entire backend in Flask framework of Python, UI part in Angular and deployed into Cloud Foundry.
2. Similarity Index between the selected powerplant projects, implemented using Data Science.
3. Implemented cross-connection between application in cloud foundry and RDBMS database in AWS.
4. Implemented two database architecture using python SQLAlchemy for the product.
5. Implemented Swagger documentation, code quality in SonarQube, and CICD test coverage in Gitlab.

- **Automatic Data Retrieval (ADR)**

1. Currently Siemens manually annotates powerplant component data (manuals, diagrams etc.). This process is highly inconsistent, labour-intensive, and of low quality resulting in high costs and information gaps. To avoid this, we extract metadata from a wide variety of document types automatically by using computer vision to use it in later projects.

Key Achievements -

1. Created secrets in AWS Secrets manager and used commands to fetch the secrets in a required format for CICD.
2. Developed a microservice to automate the monitoring of document processing per day in the server. Microservice consists of cron-job (used python aiohttp, asyncio modules), influx DB (to store the information from the cron-job), and Grafana (to visualize the stored data from influx DB). This microservice is deployed to the AWS Elastic Kubernetes Service cluster. The microservice provides us the daily data of the number of documents processed, duration of each document, total duration of all documents, how big is the document, etc.

- **Veronica**

1. Chat bot for querying the domain related queries. Chatbot works based on target words called intents and responds to the target words. We define the intents and the kind of response for the intent. Chat bot is developed using Rasa framework.

Key Achievements -

1. Owned the development of reusable chat-plugin using Angular as well as with ReactJS. The chat-plugin can be attached to any UI project which uses node modules. Using this we can query all the domain related information without being navigated to chat-bot website. This chat-plugin is equipped with speech recognition and text-to-speech.
2. Implemented synonym based response to the intents so it fetches us the same response of the intent.

- **Dashboard for Early Warning**

1. Owned the development of a prototype to generate early warnings to engineers/ fabricators and they can see the changes and the intensity or importance of the change respective to their discipline as soon as the changes take place. The warnings can be added manually or using AI we add the changes. Used Axure Rp tool to develop this.

- **Data Integration Layer**

1. The project is to collect domain specific data from different powerplants and create a data lake and visualize the data. The data we receive is in different formats. So, the data undergoes ETL process and data is kept in data lake.
2. Developed test cases for a project where the data collected from different powerplants are stored in data lake.

✓ **Android Developer (Internship)**
Hitachi Vantara, Hyderabad, India
Dec 2016 – Jan 2017 (1 Month)

- Gallery App to take photos and save it in local directory. It can be shared to any other app. The App has the features to take photos using camera, view all the photos taken with the camera. The saved photos can be shared to another apps.
    1. App works with the phones having Android 6.0 and above.
    2. Developed in Android Studio

HONOURS & AWARDS

- Spot Award (Siemens Technology India)
  For Flexibility, dedication and ownership skills on multiple use cases and commitments.

PUBLICATIONS

- iCart: An Image Selling Platform
  URL - https://ijtonline.com/AbstractView.aspx?PID=2018-8-2-2

CERTIFICATIONS

- Hacker Rank certifications
  URL - https://www.hackerrank.com/vijayasai257?hr_r=1

INTERESTS

- Cloud Architecture, Software Development, Artificial Intelligence, AR/VR, WebVR, Blockchain

PERSONAL PROJECTS

- **HLS stream & Weather API** - Implemented weather application using OpenWeatherMap API based on the geolocation of the user. Implemented video.js player for Http Live Streaming videos and mp4 videos. Developed using ReactJS.
  URL - https://sngrmvj.github.io/VideoJs-WeatherAPI/
- **React in Angular** – Implemented reusable components in Angular developed in ReactJS.
  URL - https://gitlab.com/sngrmvj/react-in-angular