Dhilip Kumar Veerapandi
Intern - A*STAR (SimTech)

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Professional Expertise

Self-directed and motivated Problem solver with Fluency in Python for data Analysis and NodeJS, Angular, C#, Java for web development.

Experienced in building dynamic chatbots with Dialogflow Framework with additional knowledge of Data Engineering, Machine learning techniques.

Education

2019-01 - 2019-02

Graduate Diploma: Systems Analysis

Institute of Systems Science, National University of Singapore - Singapore

- Pursuing with 4.13 GPA

2012-01 - 2016-01

Bachelor of Engineering: Mechanical Engineering

University College of Engineering, BIT Campus - TRICHY

- Graduated with 8.13 GPA
- Received Gold medal for academic excellence of holding 1st rank in Department of Mechanical and Automobile studies
- Dean's Honours List Year-2016

Work History

2019-09 - 2020-01

Intern

A*STAR - SIMTECH, Singapore, Singapore

1. Designed and Developed **Name Card Scanner for Auto Populating Web-form from Images** using *Python, OpenCv, pytesseract(OCR), spaCy(NLP) and mongoDB.*

- Deployed a 3-Tier web application in Aws Ec2 Instance, with Angular Frontend and Flask API Server backed by mongoDB.
- Applied regex to extract website, email, contact numbers. Used Named Entity Recognition module from Spacy NLP to extract Names from raw text, since it's impossible to express the rules using Regular expression for names.
  URL: http://bit.ly/2rTOlum

2. Built a **Real Time Dashboard** using *Angular and Nodejs* for Capturing the Order status processed by an

Contact

Address
03-149, 352 Clementi Avenue 2, Singapore.

Phone
90890177

E-mail
dhilipkumar7235@gmail.com

LinkedIn
linkedin.com/in/dhilipbinny

WWW
github.com/DhilipBinny

WWW
https://www.dhilip.ml

Skills

Database - MY SQL, SQLite, MS SQL, PostgreSQL, Mongo DB, Firebase
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Web Development - Html 5, Razor, Thymeleaf, Angular
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IDE's - Visual Studio, Eclipse, Jupyter Notebook, Visual Studio Code, Colab
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Frameworks - Python Flask, Spring, ASP.net MVC 5, DialogFlow
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Cloud - AWS EC2, RDS, Azure Webapp Svc, Heroku
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Web Scraping - Selenium, Beautiful Soup
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Data Analysis - NumPy, Pandas
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Data Visualisation - Matplotlib, Seaborn
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Machine Learning - Sklearn
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Automated Robotic Arm for customised Order Fulfilment.

- Demonstrated the Dashboard at ITAP (Industrial Transformation ASIA-PACIFIC), a leading trade event for Industry 4.0!
- Developed a *Nodejs* based Micro-service to aggregate data from two separate databases.

3. Designed and Developed a Smart **Event Management System** using *Angular, Nodejs and Mongo DB*.

- A whole functional web Application with simplified event creation and registration process, event notifications, self-check-in and QR-Code badge printing.
- Built a generic form builder from a JSON Object for Event Survey.
- Took Part in Design and Implementation of complete SDLC, Integration and Testing.

2016-07 -
2017-07

Field Officer

INTERNATIONAL TRACTORS LIMITED - SONALIKA, TamilNadu.

- Increased customer retention and satisfaction by closely monitored team member performance and assessing problematic practices.

📌 Project Experience

1. **[IoT]** **Developed a Google Assistant voice agent to control the Raspberry Pi IoT LEDS through Voice as well as chat**

- App architecture includes 2 python process and Firebase Database.
- Python based Dialogflow bot backend is receiving request from user and updates the Firebase Table. Another python client running on RaspberryPi which syncs data with Google Firebase Database. Since Firebase is a Realtime Database, the change event is propagated to the RaspberryPi Client which controls the LED bulbs. I managed to overcome challenges involved to setup Https based backend for Dialogflow to route the fulfilment Request. Also, added a simple vanilla HTML, CSS, JS based web frontend for the App.
- Please check out the demonstration video of the App in the following link - http://bit.ly/33X0lJE

2. **[Hobby]** **Developed a SG Bus Timings Web App and Chatbot using LTA DataMall API**

- I started this app as a web application, with Angular Frontend and Flask Backend which consumes the LTA DataMall Rest API for real-time bus timings given a bus stop code

- Added a telegram chatbot using botogram in Python, which is running in AWS Ec2 Instance
- Also extended the APP with a Dialogflow Voice Assistant so that user can say in voice, instead of typing the text in telegram
- During the process of adding more features for this app, managed to extract out duplicate codes and wrote a separate micro-service for common functionalities so that corresponding backends when they need information, they will consume the micro-service, rather than duplicating codes
- Deployed URLs:
  - Web APP deployed in Azure WebApp Service [http://bit.ly/35dWOqm]
  - Telegram Chat-bot with bot backend deployed in AWS Ec2 [http://bit.ly/32SNFlx]
  - Dialogflow bot demonstration [http://bit.ly/2pqXh9A]

3. [School Project] Designed a functional Leave Application Processing System (Java, Spring Boot App and MySQL)

- Developed Leave application System with functionality such as Admin Panel, Manager and Employee Dashboard as a part of *GDipSA NUS ISS Program Group Project*
- Took Part in different phases such as Design, Implementation and Integration of the APP Development Lifecycle
- Used Version control software Git to solve code conflicts issue when working with Group of 4 members
- Played a developer role in the team

4. [School Project] Developed a Shopping Cart & Tour Booking System (ASP.NET MVC5, MS-SQL)

- Built a Shopping Cart App with ASP.NET MVC5, RAZOR, MS SQL and using OOP paradigm as a part of GDipSA NUS ISS Program Group Project
- Took Part in Design and Implementation of complete SDLC
- Played a Team Leader and Integrator role, in which I set examples coding styles for rest of the team members to follow. Once features are developed, I managed to integrate the parts developed by the peers and debug issues as well

5. [Multi Container App] Built and Deployed TASK LIST App, a web application integrated with Google Sign-in and Firebase Authentication using Angular, NodeJS and mongoDB.

- Developed multi-container Dockerized Application with 3 Containers as follows, Angular Frontend Container, Nodejs backend container and MongoDB Database container

- Adopted 12 Factor App principles for the Containerized Apps and deployed in Heroku. URL: http://bit.ly/todolist-firebaseauth

Certifications

2019-07   Python Programmer DATACAMP
URL: http://bit.ly/2QuSCOT

2019-07   Data Analyst with Python DATACAMP
URL: http://bit.ly/2qofB3x

2019-08   Data Scientist with Python DATACAMP
URL: http://bit.ly/35hieDn

2018-08   Python for Everybody COURSERA
URL: http://bit.ly/2rTAjsF