

PROFESSIONAL SUMMARY

- Experience in **Python, PHP, JAVA(Basic), C++** and the **C** language.
- Working knowledge in development of **Automation Tool**.
- Good Experience with **PEP-8** and **Google** coding Guidelines in Python.
- Working knowledge of **GIT, Jenkins**, and familiar with **Software configuration management**.
- Working knowledge of **Linux Shell Scripting**.
- Working experience in **Python Modules** like **OS, Sys, Math, Time, Json, Lxml, Requests, Threading**.
- Experience in **HTML, CSS, JavaScript, JQuery**.
- Good Knowledge in **MySQL** database.
- Good understanding of **Machine Learning , Deep Learning** and **Soft computing**.
- Working experience in **Python libraries** **Scikit-learn, Keras, Matplotlib, Numpy, Tensorflow, OpenCV**.
- Experience in QT creator for **GUI**.
- Good knowledge in **Machine learning tools** like **Spyder, Jupyter Notebook, Labelling, Google colab, Orange Canvas**.
- Good experience in **DL framework** **Darknet, Darkflow** and **Tensorflow API**.
- Basic knowledge of **Hadoop**.
- Experience in **documenting** and **maintaining** reports and helping with **software** release process.
- Working Experience in **Linux** and **Windows OS**.

PROFESSIONAL EXPERIENCE

Company : **PerfectVIPs** Trainee Embedded Engineer **June 2019 - Present**

Project : **Advanced Driving Test System**

Description: The goal is to provide end to end solution for autonomous driving test using video analysis and machine learning techniques. The **driving test system** consists different kinds of test. The system gives the **result of driving test** using **detection of vehicle** and **lanes line** (Fixed Trajectory of test area) captured from **fixed position camera**. This also includes several constraints like identifying for foul i.e. vehicle should not touch the lane and must complete within **predefined time limit** . The project is developed using **Python** and **deep learning** framework like You only look once(YOLO) and Single Shot detection(SSD).Edge device is also used in this project.

Roles & Responsibilities

- Implemented **automation python script** to **manipulate** with **huge number of images** in **directory**.
- Implemented **automation python script** to **modify context** of **annotated xml files**.
- Developed **automation python script** that captures a **snap** from **live stream** and **extract** the **start line** and **lane line** and **send** it in **thread** to the **GUI server**.
- Developed **script** which runs the all **automation python script** on **boot up**.
- Involved in **collecting datasets** for **1 class** for that collected a videos from **positioned cameras** than **extract** the **frames** from it.
- Modified **configuration files** of **tiny YOLO** and **Mobile-SSD v2** to **train** the **model**.
- Implementation using **automation python script** for detection of vehicle from top view with angle.

- Check for different inference in edge device and used the best suitable framework for vehicle detection.
- **Tensorflow model** conversion which is convenient in **edge device** in order to **increase** the **computation speed**.

Tools & Technologies: Python, Numpy, Tensorflow, OpenCV,
Platform & OS: Ubuntu, Jetson nano

Project : Object and Voice Recognition

Description: The main objective focuses on **object and voice recognition** to **detect object** instances of semantic **objects** of a certain class(such as **lane, potholes, traffic sign, humans**) in **digital images** and videos so that it can be useful in **real time** to be deployed on **edge device**. To make a prototype which control according to the **real time** conditions using analyzing the **voice** for recognizing various instances of **class**(such as sirens used on emergency service vehicles and horn) and **image processing technique** using **opencv** module in **python** and further **deep learning** to achieve **faster processing** in less time with **low end devices** implementation techniques like **CNN, YOLO** and **Single Shot Detection(SSD)**.

Roles & Responsibilities

- Collection of dataset from **Open Source**.
- Involved in detection of lane using **opencv** with pipeline that follows (**HSL->grayscale->Gaussian Blur->Canny Edge->Region Of Interest->Hough Transform->Extrapolate** and **advanced lane detection**) and **deep learning** approaches like **Yolo, VGG16**.
- Also used one of the pretrained **CNN(convolutional neural network)** model in order to detect lane and **tensorflow** for better detection and developing model.
- Integration of object and **voice recognition instances** using **Deep Learning Framework**.

Tools & Technologies: Python, Numpy, Tensorflow, OpenCV, Keras
Platform & OS: Ubuntu

ACADEMIC PROJECTS

PROJECT DETAIL

Project : College Website Creation

Description: This project was aimed for **Govt. Polytechnic website** which has basic information about the college and handles various events ongoing in college. Basically three modules i.e. student, staff and admin were managed.

Roles & Responsibilities

- Creation of **backend Modules**(Staff, Student, admin)

Role: Developer

Duration: 1year(during Diploma) **Team Size:** 2 Members

Technology used: **Front-end:** Html, CSS, JavaScript.

Backend: Php

Project : Virtue Offers

Description: It is based on restaurant in which online ordering of food and approach to smartly handle in stock items and customers also by providing discounts and service of ordering and **paypal method** for payment.

Roles & Responsibilities

- **Full Stack Development**

Role: Developer

Duration: 1 year(during B.E)

Technology used: **Front-end:** Html, CSS, JavaScript,Jquery.

Backend: Php.

Project : Time Tracker

Description: **Time Tracker** is basically a **web based application** where one can track hours for particular assigned task also for overall day activities like break hours, lunch hours. At the end of the day it will generate a report regarding hours spent and send mail to the assigned guide.

Roles & Responsibilities

- Development of a **web based application**.

Role: Developer

Duration: 6months(during B.E)

Technology used: Php(Yii2 framework).

TRAINING DETAIL

- Training as a software developer for **web application** in **Php** at **Spaceo technologies(5 months)** and **Silver Wings(2 months)**.

OTHER ACTIVITIES

- Participated in **L.J. Innovation Village** and our Project was on “ **Online jewellery shopping_with_face capturing_feature**” which was nominated for an event and Project on “**Car Pooling**” with team size of 3 members.
- Workshop on Basics of **.Net(L.J.I.E.T)**.
- Workshop on **Ajax** in **.Net(Workshop L.J.I.E.T)**.
- Program for **software** and **networking**.
- **Mooc course** for **algorithms**.
- **Introduction to Data Science** (certified by Cognitive class).
- **Deep Learning with tensorflow** (certified by Cognitive class).
- Participated in **AWS alexa meetup** held in **Ahmedabad**.
- **Deep Learning Computer Vision(Udemy)**

TECHNICAL SKILLS

Languages:	Python(OS, Sys, Math, Time, Json, Lxml, Requests, Threading, Scikit-learn, Matplotlib, Numpy, Tensorflow, Keras, OpenCV, Pandas), PHP, Java, C, C++
Database:	MySQL
Tools:	Spyder, Jupyter Notebook, LabelImg, Google colab, Orange Canvas
Frameworks :	Darknet, Darkflow
Web Technologies :	HTML, CSS, JavaScript, Jquery
Operating Systems:	Windows, Linux, Unix

EDUCATION

Pursuing M.Tech. in Computer Science & Engineering , from Dharmsinh Desai University with 1 year dissertation work in PerfectVIPs, 2018 - 2020.

B.E in Computer Engineering from L.J. Institute of Engineering & Technology, Ahmedabad, Gujarat Technological University, 2018 with 8.61 CGPA.

Diploma in Computer Engineering from Government Polytechnic, Ahmedabad, Gujarat Technological University, 2015 with 8.07 CGPA.