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Medium : https://medium.com/@manivannan_data
Github : https://github.com/ManivannanMurugavel
My Play-Ground : https://www.whirldatascience.com/playground/

Career Objective:

To work as an AI programmer and help in developing intelligent programs whereby accomplishing complex tasks with the help of machines become a possibility.

Summary of Skills:

- 3+ Years of experience as a **AI Engineer(Machine Learning and Deep Learning)** with strong technical knowledge in **AI, Big Data and Data Science** platforms.
- Superior Maths knowledge, hence brilliant in developing codes for the project
- Deep involvement in Deep Learning, Machine Learning and Natural Language Processing

Technical Skills:

Languages: Python,Java,C# and R

Python Libraries: Pandas, Numpy, Scikit-learn, OpenCV and Matplotlib

Deep Learning Packages: Tensorflow,Keras and Yolo

Web Applications: Html,Php,Flask,JQuery,Angular 6 and Bootstrap CSS

Big Data Applications: Hadoop,Hive,Hbase,Sqoop,Spark,Oozie,Kafka and Zeplings

Databases: MySql,MongoDB and Postgresql

Data Visualization Tool: Microsoft Power BI and Qlik

Data Integration Tool: Mule and Knime

Time Series Application: Telegraf,InfluxDB and Grafana

ELK(6.0): Elasticsearch,Logstash and Kibana

Computer Vision: OpenCV

AWS Services: Lambda,S3,DynamoDB,Lex,Polly,RDS,API Gateway and IOT Button

Work Experience:

Company Name: Whirldata Labs Pvt. Ltd., **May-2016 to Present**

Akridata:

Concept: Collecting Automated Car Data.

Skill: Python.

AWS Skills: Lambda,API Gateway and S3.

Web Skills: Angular 6.

- It's Self-Driven car and it has images and radar data.
- Collect the data from SSD and move to cloud storage.
- We are building the annotation tool for annotate the self driven car images.

Safetee(Object Tracking):

Concept: Tracking each object(person,chair,handbag and backpack).

Skill: python.

Deep Learning Framework: Yolo-V3.

Algorithms: Darknet,Mean IOU,Euclidean distance and Linear Sum Assignment.

Web Skills: Html,CSS and jQuery(for Dashboard).

- Detect the object from the frame by using YOLOV3.
- Track these objects using ML algorithms with a zed camera.
- Assign a label(A to etc) to each object and track it.
- Maintain all tracking history data using MySQL and visualize it.
- Detect the alarm status and watch the person movements.

Product Identification:

Concept: Searching the product from e-commerce website.

Skill: Python and java.

Python Libraries: tensorflow.

IDE: Android Studio.

- This is build by android app to identify the product.
- Hold the camera on product and identify it.
- Applied frozen graph to making the lightweight trained model.
- Once identified the product, then showing the product price, ratings and descriptions.

Workonic:

Concept: Classify the face emotions and sentiment analysis.

Skill: python.

Deep Learning Library: Tensorflow(1.8) and Spacy.

Algorithms: CNN and RNN(LSTM).

- It is used for webcam online interviews.
- It helps to find face emotions from the video.
- Find the sentiment analysis from the paragraph and extract the POS tagging using spacy.

Artificial Intelligence(Deep Learning):

Concept: Classify the images and paragraphs, Language Translation, X-Ray Analysis, Garbage Sorting, People count, Gym-Push-ups, Pose Estimation, Object Localization, Semantic Segmentation and Instance Segmentation.

Skill: Python.

Deep Learning Packages: Tensorflow, Keras and YOLOv2.

Architectures: CNN, LSTM, Encoder-Decoder, Seq2Seq, Faster RCNN, Segnet, and Mask RCNN.

pyfacy(Python Package):

Concept: Face Recognition and Face Clustering.

***Skill*:** Python.

Libraries: Scikit-learn,scipy,opencv,numpy,dlib and imutils.

How to use: pip install pyfacy.

- Face Recognition for classification and prediction of the images.
- This implementation is achieved through following four ML algorithms such as
- 1)KNN - K-Nearest Neighbors,
- 2)LOG_REG_BIN - Logistic Regression with two classes,
- 3)LOG_REG_MUL - Logistic Regression with more than two classes,
- 4)LDA - Linear Discriminant Analysis.
- Applied the machine learning algorithm to cluster the images.
- Cluster the faces and move it to separate directory.

Python Package Link: https://pypi.org/project/pyfacy/

Github Link: https://github.com/ManivannanMurugavel/pyfacy

Chat BOT(Whirl-BOT):

***Skills*:** AWS Lambda,AWS Lex,AWS Polly,AWS API Gateway,AWS DynamoDB and Google Firebase.

***Web Skills*:** Html,Bootstrap CSS and Jquery.

***Integration Device*:** Amazon Echo, Google Virtual Assistant, Facebook Messenger and Web Browser.

- Integrate with Automated ChatBOT engine named WhirlBot.
- It's also integrated with Third Party Messaging systems.
- It's our own automated chatBOT engine.

Intent-Entity Recogniser Engine:

Concept: Multi Label Classification.

Skill: Python.

Libraries: NLTK,Flask,Spacy,Magpie,Tensorflow and Keras.

Web Skills: Html,Bootstrap CSS,Jquery and AngularJS(1.4.8).

- To integrate flow for chats.
- To integrate Intent Recommendation.
- This is my own Intent-Entity recogniser.

GPU Setup:

Graphics Card: Nvidia GTX 1050 Ti.

GPU Memory: 4GB.

Installation Nvidia Driver: Cuda and cuDNN.

Operating System: Ubuntu(16.04) and CentOS 7.

Others:

- Control the LED lights with mobile app using Raspberry PI 2.
- SODA Bot using Raspberry PI with Alexa.
- Done some dashboard with e-commerce data using D3.js.
- Created the attendance system using face recognition with Raspberry PI 2 Model B.
- Implemented the security system using keylogger and monitored it.
- Managed the time serious data from different sensors and monitored by Grafana
- Implemented on e-commerce for voice based search engine.

Company Name: Citrisys Solutions **Jan-2016 to May-2016**

Big Data:

Skills: Hadoop,Hive,Hbase,Sqoop,Oozie and Spark.

Web Application**:** JSP,Servlet.

- Integrated with Multi Node Cluster.
- Implemented various POC projects.
- Collected car data and used the data for further analytics using Mapreduce.
- Integrated with OAuth Login(Google and Facebook Login).

Education:

2012 - 2015 : Master of Computer Applications, MAM College of Engineering, Trichy.

2009 - 2012 : B Sc (Mathematics)., Govt Arts and Science College, Kumbakonam.