Tamil Selvan

Machine Learning Engineer

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Summary

Experienced AI/ML engineer & Crypto Enthusiast who has a proven record of AI/ML-based model deployment and Dashboard integration for product and as a service. Recognized for the ability to construct a product with strong technical expertise, architect, and code service based & POC projects with quick turnaround time. Currently, learning core block chain and smart contracts with Solidity on Ethereum native network.

Skills

- Python
- Computer Vision & Image Processing
- Docker
- Deep Learning
- TensorFlow and Keras
- Scikit-Learn, Flair and PyCaret
- NumPy
- Aerial Image Processing
- Naturel Langauge Proessing(NLP)
- Qgis
- Open3D
- SQL
- Data Analytics & Data Visualization
- Matplotlib
- AWS SQS
- ETL Process & MSSQL
- Linux (Ubuntu) server
- Digital Signal Processing(DSP)

Experience

Machine Learning Engineer - 01/2021 to Present **(1 year)**

The Alacer Group, Bangalore, India

- Built the Entity Resolution Module with **96%** accuracy that can crunch **1 million** Customer & Transaction Data per day that can generate a relationship between multiple entities.
- Handle production-level issues and code review for deployments
- Built a model for Predicting **Money laundering** using the customer transaction behavioral analysis and the network analysis with other transactions
- Developing a cryptocurrency AML module that can relate the blockchain transactions, address to real customer entity for the Banks and **Crypto-related Transactions** Flagging module with a help of search key tags using custom built **word2vec** model.
- Build NLP based Address parser CRF model with **92%** accuracy that can parse the global address into a city, state, zip and Country
- Worked on **AI-Enabled ETL** on Transaction Monitoring & Data Normalization enhancements
- Process Design, Reengineering, and Optimization with ML modules
- Multiple **ML plugins** are built & deployed within the product which is a part of the production pipeline.

Lead Programmer- 08/2018 to 12/2020 **(2.4 Years)**

[Datasee.AI](formerly Takvaviya Analytics Private Limited)**,** Chennai, India

- Coded & built the entire **data analytics for COVID19** contact tracing-Analytics Dashboard for Coolpad's Proximity Tracking Device
- Architected and built more than 5 projects and 2 R&D solutions
- Delivered more than **3 POC 's** within weeks of timeline
- Trained & Deployed **Mask RCNN** model to segment the v3 Stage- **Sweetcorn** plants from the soil to detect the gaps between the row of crops which are not germinated (**Resnet50 backbone)**
- Built Keras RetinaNet object detection model for Solar Farm Construction Progress monitoring to detect 6 classes of construction features
- Developed multi-stage computer vision pipelines using image processing & logical techniques for large scale aerial imagery system with global projection systems
- **Automated & Reduce 80%** of **workforce** & time involved in the remote sensing-based production pipeline which has manual operation timeline of 9 days to automated turnaround time of 6 hours.

Education

➢ Master of Science: **Robotics and Automation**- 2017
University of Salford, Greater Manchester, UK

➢ Master of Science: **Electronics**- 2016
VIT University, Vellore, India

➢ Bachelor of Science: **Physics**- 2014
Loyola College **(Autonomous)**, Chennai, India

Certifications

- **Certified Data Scientist**
The International Association of Business Analytics Certification **([IABAC™](IABAC))**

- **Image Processing & Computer Vision**
Technology Information Forecasting and Assessment Council **(TIFAC)**

- **ARM microcontrollers**
Technology Information Forecasting and Assessment Council **(TIFAC)**

Personal & Collaborative Projects

- edaSQL : Open-Source Python Package for SQL Bridge to Exploratory Data Analysis

- dummylog : Open-Source Python Package to help the python module/plugin developers to create/update the log files in simple syntax and easy format

- [pypostalwin](): Un-Official Python Package for libpostal, a fast statistical parser/normalizer for street addresses anywhere in the world.

- [COVID19](): A Novel Automatic Summarization of Biomedical Documents Using Disease-Specific Text Corpora

- [Electric Vehicle's Charge Event Detection]() using Smart Meter Data with 1D CNN (LSTM and GRU)

Achievements

- ➤ **Employee of the Year - 2018**
  Datasee.ai (formerly Takvaviya Analytics Private Limited) Chennai

- ➤ **Students Union Secretory (2013 – 2014)**
  Loyola Students Union, Chennai

Medium Articles

- ➤ How your life will be in **MetaVerse**

- ➤ How to create a log in python using **dummylog**

- ➤ Exploratory Data Analysis on SQL using python **(edaSQL)**

Languages

English (Full Professional Proficiency)   Tamil (Native Proficiency)