Rajesh Shanmugam

✉ rajeshshanmugam02@gmail.com 📞 9791186571 github.com/rajeshshanmugam-s

Professional Experience

AR XT Labs
03/2021 – present

ML Engineer

Responsible for design and development of ML systems, Identifying use cases for ML-based automation within the existing process. Developing Applications that directly impact the team's productivity.

PositiveNaick Analytics
2018 – 03/2021

Data Analyst / Software Developer
Chennai, India

Responsible for end to end data science pipelines which includes writing code, building models, and evaluating models. Being a part of the backend team focusing on Application Development (Primarily on ML, NLP, and CV).

Skills

Python ● ● ● ● ○

NLP ● ● ● ○ ○

Database ● ● ● ● ○
Neo4j, MongoDB, SQL, PostgreSQL, Redshift

Computer Vision ● ● ● ○ ○
Image classification, Image Processing, Face detection, Object detection and Object tracking.

Machine Learning ● ● ● ○ ○

Software Development ● ● ● ○ ○
GIT, Linux, Containers

Projects

Chatbot Application

Yekaliva

Back end contributor, Wrote code, built ML models(Classification Model), and Knowledge graphs(Neo4j) for the rapid intent processing and retrieval. Exposure to NLP techniques and libraries.

Data Virtualization

The primary objective is to Architect a Data warehouse and Exhibit the Data in a Hybrid model, Which is the combination of NLP and Data Visualizations. Responsible for the end to end pipeline, which consists of Requirement gathering, Data collection(S3), Data Engineering(AWS Glue, Redshift), Writing code(Web Application which was built purely on python), and the deployment(Docker) also responsible for Communicating with business users.

Computer vision

The primary objective is to track persons from multiple cameras with a fast processing system due to real-world constraints, Pre-trained models are not used. It leads to the use of OpenCV extensively. This project also includes demographics identification(Neural Networks), object detection, and localization.

Retail Analytics

Analytics as a Service

The objective is to segment the customers based on their Visiting and buying patterns(RFM Analysis) as Champions, At-Risk, and Needs Attention customers. It also includes identification of upselling and cross-sells items based on how those items contribute towards sales amount for a particular customer(Personalized recommendations).

Side Projects and POCs

Simulation Trials
To validate and understand the ML models and Factors contributing to the prediction by visualizing(Streamlit) the prediction probabilities, Planning on extending this with more features like automating Data exploration, Model recommender, and Model evaluation.

Semi Voice Process Automation
The objective is to Automate the semi voice process by replacing the Agent with an ML model. It comprises multiple modules includes listener, STT, Answering bot(Classification Model) and the TTS.

STT Experiments
It has multiple objectives like keyword spotting in an Audio clip, Speaker diarisation, and Speech modification. Google STT API and Deepspeech model was used in this experiment.

Table to Grpah
Graph recommendation system, Based on the type and Distribution of the data. With the Input data in CSV, data types are identified, and based on the types of data will be sliced and diced for Visualizations. Currently, it supports Univariate and Bivariate Analysis. Multivariate Analysis is under work in progress

Data Summarizer
One of the modules of Table to Graph, Which identifies the data types, and also cleanse and normalize the data if required.

Interests

- Computer Vision
- Analytics as a Service
- Augment Reality
- Data Engineering
- Dev-Ops

Education

DR.MGR University   2013 – 2017
B.Tech   Chennai, India

References

Rinaldo Rex, *Head of Products Lab*, Zephony
9500646400

Raj Kumar, *Head of Execution & Delivery*, PositiveNaick Analytics
9962675104