Gayathri Pulagam

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EDUCATION

San Jose State University
MS Software Engineering (Data Science) 2021
Web and Big Data Mining
Deep Learning
Reinforcement Learning
Systems Engineering

Jawaharlal Nehru Technological University
BS Computer Science 2017
Data Structures and Algorithms
Design Patterns
Operating Systems
Distributed Systems

WORK EXPERIENCE

Virufy
Software Engineer (ML) Apr. 2022 - Current

- Working on migrating the data preprocessing pipeline and data storage to AWS data wrangler and feature store
- Developing attention-based model architectures for audio classification
- Evaluated various mel-spectrogram generation techniques for preprocessing audio data
- Augmented audio data using techniques like noise injection, pitch change and shifting time using python's librosa

Butterfly Edufields
Software Engineer June 2017 - July 2018

- Responsible for building server-side backend for the company's e-commerce web application
- Developed APIs for payment processing on the web application to process the user's payments online
- Worked with the QA and product teams to ensure efficiency and user-friendly experience of the web application

SKILLS

TECHNICAL SKILLS: Python, Java, SQL, AWS , Machine Learning, Computer Vision, Data Analysis, Data Preprocessing, Docker

PROJECTS

LipScribe - An Application to generate text from lip movements June 2021 - Dec. 2021

- Developed and trained a 3D-CNN architecture to generate text sequences from a person's lip movements
- Trained the model efficiently using distribution training strategy on AWS sagemaker
- Developed a data preprocessing pipeline to extract the region of interest from video frames using open cv

Driver Distraction Detection using Neural Networks Jan. 2021 - May 2021

- Built a custom EfficientNet model to detect drivers in images and classify each driver based on their posture into 10 different categories of safe or unsafe driving
- Developed real-time visualization dashboards using TensorBoard to monitor the performance of models during training
- Experimented with various image preprocessing techniques using Keras' image preprocessing module and augmented images using Keras' data generator

Banking Application using React and Node Jan. 2021 - May 2021

- Developed APIs to transfer funds between users and display the list of financial transactions on the user's homepage using Node and Sequelize
- Designed and developed UI and frontend components for transfer funds and transactions APIs using React
- Deployed the web application to AWS in an Auto Scaled EC2 Cluster with Load Balancer

Customer Segmentation and Increased Engagement using Machine Learning Aug. 2020 - Dec. 2020

- Amalgamated various e-commerce datasets by calculating latent variables to deal with data imbalance
- Calculated spending scores for the users to draw meaningful insights on user buying patterns
- Calculated user engagement scores by assigning weights to the purchase event types for that particular user
- Segmented customers into 5 cohorts by calculated Customer Lifetime Values

Hateful Meme Detection Aug. 2020 - Dec. 2020

- Generated descriptive text captions for images using a pre-trained CNN + RNN based model
- These captions were used along with the meme text in the images to perform multi-modal classification of memes as hateful or non-hateful
- Developed a web interface and created an endpoint using AWS SageMaker and AWS Lambda