SACHIN NEKKANTI

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EDUCATION

San Jose State University: *San Jose, California* ***Expected: May 2023***
Master of Science - Artificial Intelligence

Indian Institute of Information Technology, *Sri City, India* ***May 2020***
Bachelor of Technology - Computer Science and Engineering

TECHNICAL SKILLS

Programming Languages:	Python, C / C++, R.
Tools:	AWS S3, AWS Sagemaker, Git, Docker, Jenkins, Nvidia Triton, Nvidia TensorRT, CUDA.
DL Frameworks:	Tensorflow, Keras, Pytorch.
Data Management:	MySQL, MongoDB, DynamoDB, Hadoop, Spark, Kafka.
Libraries:	OpenCV, Scipy, PIL, Librosa, Pydub, pyAudioAnalysis, Scikit-learn, XG- Boost, Numpy, Pandas, Matplotlib, Seaborn, Plotly, Scrapy, fastai, spaCy, Gensim, Flask, Hugging Face.
Models:	SVM, KNN, K-Means, Random Forest, MLP, CNN, RNN, LSTM, GRU, GAN, DAE, RBM, DBM, VAE, BERT, PointNet, Graph NN, U-net, MDP, SARSA, Q-Learning, Deep Q-Learning, Actor Critic.

PROFESSIONAL WORK EXPERIENCE

Machine Learning Intern - *Swiggy, Applied Research Team, Bangalore India* *Jan 2020 – Jun 2020*
- Worked on the Audio Sentiment Analysis of customers Telephone Conversation Audio Data.
- Created a custom dataset using the recorded calls from the customer care database.
- Developed a Novel End to End trainable model for Speech Emotion Recognition and achieved a rise in accuracy of 32% from the base model.

Deep Learning Intern - *AjnaLens, ML- R & D Team, Mumbai India* *Jun 2019 – Aug 2019*
- Worked on improving Ajnalens AR+VR headset
- Developed a light-weight and multilingual Wake Word Listener using GRU and achieved a 90% accuracy on the custom dataset.
- Designed a pipeline for data acquisition and automated annotation for the Wake word Listener.
- Engineered an End to End Deep learning model for Semantic segmentation of 3-D point clouds and achieved 82% accuracy.

PROGRAMMING PROJECTS

Image Inpainting(Undergrad Capstone)
- Implemented a deep learning model using U-net architecture with Partial Convolution layers which automatically reconstructs the corrupted parts of the given image.
- Used ImageNet and CelebA-HQ datasets for training and testing.
- Experimented the performance by replacing U-net by various ResNets and proved that U-net architecture works best for this task.

Semantic Image Segmentation(Undergrad Research)
- Developed an End to End deep learning model based on Seg-Net architecture which partitions the image into semantically meaningful parts, and classifying them into respective classes.
- Trained the Seg-Net model on Pascal-VOC dataset and achieved a 12% rise in accuracy from past year on the custom dataset.

News Article Category Classification(Masters Course)
- Cleaned the raw News text data like removing the special characters,converting lowercase letters, stemming and tokenization.
- Implemented TF-IDF, Word2Vec and Tensorflow Word Embeddings vectorization techniques on the cleaned data.
- Developed multiple machine learning models like Multi Class Logistic Regression, Random Forest and LSTM for the classification of News text data into different categories.
- Achieved an accuracy of 72% on the News Category dataset from kaggle and hosted the model using Flask API and Jinja.

AI Lunar Lander(Masters Course)
- Designed End to End trainable reinforcement learning models which lands the lunar lander on the launching pad efficiently.
- Used Deep Q-Learning and Actor Critic algorithms and trained them on LunarLander-v2 environment from the OpenAI Gym.
- Analyzed the performance of both the models and found that DQN has taken more time to land while Actor Critic has taken more episodes to converge while training.

INTERESTS

- Machine Learning / Deep Learning / Audio / Speech / Computer Vision / 3D / NLP / Model Optimization / Pruning / Quantization.