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Work Authorization: F1

Tanmay Vakare

Data Scientist/ ML Engineer

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EDUCATION

The University of Texas at Dallas, Richardson, Texas

August 2021 - July 2023

Master of Science in Computer Science

- Relevant Coursework: Algorithms, NLP, ML, Statistics for Data Science

Gujarat Technological University, India

August 2014 - May 2018

Bachelor of Engineering in Information Technology, GPA 8.5/10

- Relevant Coursework: Algorithms and Data Structures, Big Data, Data Mining, Business Intelligence

SKILLS

Technologies	Python, C++, C, R, Java, CUDA, Javascript, MATLAB, Octave
Frameworks	PyTorch, TensorFlow, Keras, NLTK, Spacy, Gensim, Flask, Django, DeepStream, Gstreamer
DBs & Infrastructures	MongoDB, Firebase, MySQL, Redis, Azure, AWS, Google Cloud Platform, Heroku, Docker
AI	Natural Language Processing, Machine Learning, Deep Learning, Computer Vision, Model Optimization

TECHNICAL EXPERIENCE

Data Scientist

August 2019-July 2021

Blackstraw.ai

Chennai, Tamil Nadu

- Delivered results in a fast-paced environment while ensuring quality and, encouraging creativity and innovation.
- Extracted information from images using Graph-based deep learning models and optimized the workflow by correcting the pre/post-processing components, hence improving the precision of the entire workflow by 5%.
- Cleaned, transformed and processed high volume data to visualize statistical insights using PowerBI dashboards.
- Designed a domain specific lexicon model and NER model to parse and extract information from free-text, and deployed the same using Azure ML pipelines.
- Assisted researchers from Stanford to develop low latency, asynchronous embedded software for fully functional low cost mechanical ventilators.
- Developed highly scalable realtime video analytics/monitoring platform using YoloV4 on NVIDIA Deepstream and Gstreamer, to monitor COVID-19 guidelines using 40 CCTV cameras at workspace with 7,000 footfall everyday.
- Optimized the low level CUDA plugins to improve the inference of object classifier in video analytics by 10%.

Co-Founder, Technology Lead

January 2019-July 2019

Rehabo Technologies

Vadodara, Gujarat

- Devised an algorithm for detecting and evaluating physical therapy exercises using V-NECT deep learning model.
- Formulated scoring system for testing accuracy and used Firebase to store personalized data of each patient.
- Resulted Home-Based Rehabilitation Device potentially reduced rehabilitation cost by 30%.

PROJECTS

Perceptually-enabled Task Guidance

- Developing AI driven system to guide user to perform complex physical tasks while making them more versatile by expanding their skillset and more proficient by reducing their errors. Working on leveraging Probabilistic Graphical models to assert the correct ordering of the tasks performed.

Speech Translation

- Developed Mandarin-English and vice-versa speech translation pipeline using Deep Learning Speech Recognition/Synthesis models and Convolutional encoder + RNN Decoder based Sequence-to-Sequence Neural Machine Translation models.

Abstractive Summarization

- Built an abstractive summarizer model to summarize news articles by adopting a multi-stage fine tuning approach for encoders and decoders in transformers based BERT language model.

PUBLICATIONS

- Tanmay Vakare, Kshitij Verma, Vedant Jain "Sentence Semantic Similarity Using Dependency Parsing", Proceedings of 10th International Conference of Computing, Communication and Networking Technologies (2019): DOI: [10.1109/ICCCNT45670.2019.8944671](https://doi.org/10.1109/ICCCNT45670.2019.8944671)