

Tushar NEMA

Machine Learning | Deep Learning Engineer

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🎓 BTech in Computer Science and Engineering | IIIT Kalyani | CGPA-8.39/10

Ability to train elementary machine learning models, to select right tools, optimization and to judge when the model is trained well enough for a particular purpose.

WORK EXPERIENCE

June 2020 Present	ZYCUS ASSOCIATE TECH LEAD AI <ul style="list-style-type: none">➤ Working with Merlin AI Team which manages the procurement tools for Zycus thus impacting the business directly.➤ Developed Fraud bot for duplicate Invoice detection bot removing 98 percent of fraud invoices from datalake.➤ Worked with software development and testing team members to design and develop robust solutions to meet client requirements for functionality, scalability and performance.➤ Created customized applications to make critical predictions, automate reasoning and decisions, and calculate optimization algorithms which increased efficiency by 32 percent. <div>NLP Unstructured Data Fraud Detection Elasticsearch Clustering</div>
July 2019 June 2020	Capillary Technologies MACHINE LEARNING <ul style="list-style-type: none">➤ Developed an Automatic Speech Recognition System(ASR) from scratch with WER 9 on noisy speech.➤ Used Kaldi to build an ASR which aims at doing speech recognition on noisy speech. Also built noise removal and speaker diarization bots which helped increasing accuracy by 7 percent.➤ Deployed NLP bots on the output of ASR , sentiment analysis ,NER which added 50 percent value to the retail product. Deployed microservices for individual components of speech pipeline. <div>Speech Recognition Kaldi ASR NLP NER Deployment</div>
May 2018 July 2018	IIIT ALLahabad SUMMER RESEARCH ASSOCIATE <ul style="list-style-type: none">➤ Classified the EEG signals for movements of human hand and foot with 84 percent accuracy.➤ Gathered, arranged and corrected research data to create representative graphs and charts highlighting results for presentations. <div>BCI EEG Classification</div>

PROJETS

LICENCE PLATE DETECTION github.com/tusharnema/OCR-Using-CTC-Loss	2020
INDIAN REGIONAL LANGUAGE STEMMER <ul style="list-style-type: none">• Extraction of similar words for the given inflection word by applying cosine function on feature embeddings of given words and ranking them by score.• Applying a developed mathematical function on each of the top n ranked words to calculate the stemming score and thus finding the stem. <div>NLTK Gensim Object Detection CTC Image Augmentation</div>	2019

SKILLS AND FRAMEWORKS

Languages	Python, HTML, CSS, SQL
Frameworks	Tensorflow, Keras, Pytorch, Elasticsearch, Flask, Fastapi, Kaldi, REST
Libraries	Pandas, Numpy, Spacy, Seaborn, Matplotlib, scikit-learn, opencv
DL Networks	USE, LSTM, RNN, CNN, BERT, GAN, Autoencoders
Editors and interface	Kibana, Visual Studio Code, Pycharm, Jupyter, git