

# Dubba Tharun Reddy

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## EXPERIENCE

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### Yokogawa Electric Corporation

Oct 2019 – Present

*Machine Learning Engineer-2*

*Tokyo, JP*

- Responsible for gathering requirements and development of end-to-end ML/DL models at 4 factories.
- Reduced Inference time of images by 40% using asynchronous processing for different segments with RabbitMQ and Celery.
- Developed a new desktop app to complement AI solution for facilitating inspection of images resulting in reduction of inspection time by a factor of 2.
- Participated in on-boarding of new employees and mentored 2 juniors in the team.
- Enhanced coding standards by establishing guidelines and mandatory code coverage.

*Machine Learning Engineer*

- Developed and Integrated Deep Learning solution at factories to decrease man-hours for classification of semi-conductor chips by 65%.
- Built CI/CD pipelines using Azure pipelines and Terraform to automate deployments on Azure.
- Migrated structured and unstructured data from 8 factories across different countries into OT Data Lake enabling analytics for different consumers.
- Enabled real-time visualisation of transformed production data for factory personnel to enhance productivity using Azure IoT Hub, Spark and Tableau.

### Mathworks

May 2018 – July 2018

*AI Intern*

*Hyderabad, IN*

- Decreased speed of forward pass in Semantic segmentation of real-world images for autonomous driving by optimizing the model and improved the accuracy by 5%.
- Integrated to MATLAB's Automated Driving toolbox.
- Used by the company in their Autonomous Vehicle for testing on Hyderabad street images data.

### Indian Institute of Technology

Aug 2017 – May 2019

*Undergraduate Teaching Assistant*

*Hyderabad, IN*

- Teaching Assistant for *Intro to AI&ML*, *Deep Learning* and *Circuits* courses.
- Setting and evaluating assignments, conduct exams, assess student's programming skills, provide feedback and conduct skill building sessions.

## PROJECTS

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### Unsupervised voice activity/Word detection | *Python, Tensorflow*

- Developed an unsupervised deep learning model that can detect voice activity in a speech signal.
- Useful in VoIP systems where the cost of transmitting is significant, helps achieve better performance in low bandwidth networks and leads to lower data usage.
- Achieved 40% accuracy on Phoneme clustering for it's usage on word detection.

### Story similarity Detection | *NLTK, Numpy*

- Implemented LSH combined with MinHash for efficient similarity hashing using TF-IDF scoring.
- Also tried Community Detection on Tweets and Reuters data for news to find similar stories.

## TECHNICAL SKILLS

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**Languages:** Python, SQL, JavaScript, C/C++, MATLAB, HTML, CSS.

**Data science:** Keras, Tensorflow, Pytorch, Numpy, Pandas, ScikitLearn, OpenCV.

**Others:** Git, Docker, Azure, Spark, FastAPI, Tableau, Electron, Terraform, RabbitMQ.

## EDUCATION

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### Indian Institute of Technology

Aug 2015 – May 2019

*B.Tech, Major in Electrical Engineering, Minor in Computer science; GPA: 8.63*

*Hyderabad, IN*

- Coursework - Data Structures & Algorithms, Computer networks, DBMS, Applied Machine learning, Data mining, Speech systems.