# Mallikarjuna Tupakula

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An innovative thinker, curious learner, and self- motivated fellow, Interested in Deep Learning, Computer Vision and Neuroscience and also interested in reading the research papers and learn new problem-solving methodologies from researchers and try to apply in real-world problems.

EDUCATION Bachelor of Technology in Computer Science and Engg.

2016 - 2020 RVR & JC College of Engineering

Intermediate

2014 - 2020 Narayana Junior College

Class X

2014 Sri Srinivasa High School

**EXPERIENCE** 

Research Intern, Indian Institute of Technology, Madras

Dec 2019 - Present

Working in Computational Neuroscience Laboratory under the guidance of **Prof. Srinivasa Chakravarthy** in the **Neuromotive** team on Deep Learning and Computer Vision.

**Research Intern**, National University of Singapore, Singapore

Sep 2019 - Oct 2019

Worked on a project Automatic anomaly detection in graphs to find unusually dense subgraphs using deep learning techniques with a Ph.D. student.

Research Intern, Indian Institute of Management, Bangalore

May 2019 - July 2019

Worked under the guidance of **Prof. Trilochan Sastry**. Professor had assigned me to do Research on villages for the development of CCD (**Center for Collective Development**). He founded a startup called **Farmveda** where I worked on Research, Data Analysis, and Digital Marketing.

**PROJECTS** 

# 1. Image Captioning

It was one of the projects in the Udacity Computer Vision Nanodegree Program which predicts the captions for a given image. I had implemented this project using a combination of CNN and RNN architecture in my model. **Link to GitHub** 

Written in: **Python** Libraries used: **PyTorch** 

# 2. Facial Keypoint Detection

It was a project in the Udacity Computer Vision Nanodegree Program which detects facial key points in an image containing faces. I had an image processing library for processing images and a Machine Learning library for creating a Convolutional Neural

Network. **Link to GitHub** Written in: **Python** 

Libraries used: OpenCV, PyTorch

# 3. Supervised Learning approach to Detect Anomalies in Blockchain using Federated Learning.

I was inspired by Research article Chained Anomaly Detection Models for Federated Learning: An Intrusion Detection Case Study. I started working on this project on my own. A secure and Private AI course on Udacity will help to do this by Federated Learning. Link to GitHub

Written in: Python

Libraries used: PyTorch, PySyft

**4.** Fake News Detection using Natural Language Processing and Machine Learning I was inspired by Research Paper "Liar, Liar Pants on Fire": A New Benchmark Dataset for Fake News Detection. **Link to GitHub** 

Written in: Python

Libraries used: Scikit-Learn

### 5. Finding Lanes in a Road using OpenCV

I had applied basic computer vision techniques to find lanes in Road. Link to GitHub

Written in: **Python**Libraries used: **OpenCV** 

**Deep Learning** (Intermediate), **Computer Vision** (Intermediate), **Natural Language Processing** (Beginner)

Libraries: PyTorch, TensorFlow, OpenCV, PySyft

**Operating Systems:** Windows, macOS and, Linux

Strategic Planning, Digital Marketing

# **CERTIFICATES Computer Vision Nanodegree**, *Udacity*

Sep 2019 - Present

Deep Learning, PadhAI

Aug 2019 - Present

#### Secure and Private AI Scholarship Challenge Nanodegree Program, Udacity

May 2019 - Aug 2019

# MATLAB for Advanced Scientific Computing, Stanford Lagunita

Apr 2019 - June 2019

#### How Google does Machine Learning, Coursera

May 2019 - May 2019

# Python Data Structures, Coursera

Apr 2019 - May 2019

#### The joy of computing using Python, NPTEL

Dec 2018 - Apr 2019

#### Understanding Einstein: Special Theory of Relativity, Coursera

Apr 2017-June 2017

**S**KILLS

**SCHOLARSHIPS** 1. Intel Edge AI Scholarship offered by Intel 2. Computer Vision Nanodegree Scholarship offered by Facebook 3. Secure and Private AI Scholarship offered by Facebook 1. Finalist in Sabre Hack **HACKATHONS** 2. Participated in American Express CodeStreet'19 3. Participated in Schneider Electric Go Green in the City Challenge 2019 4. Participated in NEC open Innovation Hackathon **LANGUAGES** English (Intermediate), Hindi (Beginner), Telugu (Native) Reading Research Papers, Reading Books and Magazines, Travelling, Physics, **INTERESTS &** 

Culture, Hiking, Playing Games, Exploring Technology **HOBBIES**