

# Sanket Thakur

[sanketkumar1996@gmail.com](mailto:sanketkumar1996@gmail.com) | [sanket.thakur@iit.it](mailto:sanket.thakur@iit.it)



## Education

- **PhD Student**, Italian Institute of Technology (Multi modal learning)  
Nov 2020 - Present
- **School of Engineering**, Cochin University of Science & Technology — *Computer Science (Bachelors), First Class*  
Aug 2014 - 2018 - (4 years)

## Experience:

- **ML Fellow**, [Fellowship.Ai](#) Sept 2020 - Present
  - Developed a pipeline for engagement analysis of users in meetings using facial expressions and gestures from videos. Currently working on an object detection model for fridge food type detection. Used PixGan for dataset generation.
- **Research Intern**, Nokia Bell Labs March 2019 - June 2020
  - Worked on frame detection(I/B/P/IDR), prediction and classification from packets applied to RL to train a network, created a complete test-bed for QoS mechanism, and fully automated agents for multi-agent learning.
- **Software Engineer**, SmartVizx May 2018 - Jan 2019
  - Worked with product team to build India' first VR product, [Trezi](#)
- **Mentor at School of Innovation**, Facebook June 2018 - Feb 2019
  - Designed and developed the complete course with other mentors and mentored the winning team of the course. Currently adopted by some universities.
- **R&D Intern**, SmartVizx May - July, 2017
  - Worked on procedural mesh components. Developed a plugin in Unreal for real-time mesh building for skp, fbx and obj models.
- **R&D Intern**, Ernst & Young Jan - April, 2017
  - Developed a project to improve the public toilet facility in India working with a research team in Trivandrum.

## Research Projects :

- **Guitar 101**: Developed an Arduino [board](#) to map music tones to guitar chord pattern presented by LED lights. Presented at UNESCO TECH 2018, [Vizag](#). [PPT](#)
- **Abbie (AR/VR Sensor Based robot for Intuitive Exploration)**: Used Google project tango based area learning and raspberry pi to build an autonomous small scale vehicle
- **Casie (Context Acquired detail Sensing in Indoor/outdoor Environment)**: Implemented a pseudo-deep-learning model to compare results from multiple machine learning models for emotion analysis using voice and image.

## Awards :

- CUSAT Launchpad, IEDC Kerala - Winner
- Ideation BootCamp, NIT Trichy - Winner
- EY Innovation Hackathon - Winner
- MHacks Nano - [Winner](#)
- KPIT Sparkle '17 - Among 118 finalists from 16 thousand.

## Selected Projects:

**DinoAI** Trained a pygame agent to play google chrome dino game.

**PokemonGAN** : Generated fake pokemon images using DCGAN

**Navigation**: DQN trained unity agent to identify and pick objects using CNN

**Image Matting**: Wave U-Net model for automatic portrait segmentation.

## Tech-Stack :

Proficient Languages: Python, C++, Java

Frameworks: Android, Unity, Unreal, ELK stack, Tensorflow, Pytorch, gym, OpenCV, mujoco

## In Media :

- Speaker at [Developer Weekend, Bangalore, 18 & Trivandrum, 17](#)
- Mentor, [School of Innovation, Facebook](#)
- Speaker at Pycon Limerick, 2019, [PyconIreland, 2019](#)

Currently on top 10 leaderboard for openAI gym env - [LunarLander](#) & [MountainCarCont](#)

## Interests:

- Computer Vision
- Machine Learning
- Deep Reinforcement Learning.
- Signal processing
- Multi modal learning

## Paper :

- The Usage of CycleGAN for Image Translation to Increase the Size of Fridge Food Types Dataset [Link](#)