

# Utkarsh Verma

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## Work Experience

- Jul 2019 - Present **Software Developer**  
**Samsung Research Institute, Delhi**
- Working on Samsung **Smart Fridge** application for **recognizing food items**, their location and time tracking and classification of objects into further sub-categories.
  - Implemented a **human body pose detection** model for Samsung Mediavision Framework which is to be included in Tizen OS library.
  - Implemented various object localisation and detection models on **Smart TV** frames as a solution for **Logo Detection**.
- May 2018 - Jul 2018 **Research Intern**  
**Central Electronics Engineering Research Institute, Pilani**
- Implemented the state-of-the-art deep neural network architecture for **Super-resolution and Enhancement of images** and trained it on a dataset of 800 high-resolution images.

## Skills

- Languages C/C++, Python, Go (Beginner)  
Database MySQL  
Frameworks PyTorch, TensorFlow  
CV Fields Object Recognition, Object Detection and Localisation, Pose Estimation  
Miscellaneous Git, Docker

## Education

- 2015 - 2019 **Delhi Technological University**  
*Bachelors of Technology, Electronics and Communication Engineering*  
CGPA - 7.92/10.00
- 2012 - 2014 **Kendriya Vidyalaya, Allahabad**  
*Senior Secondary Certificate Examination, CBSE*  
Aggregate Score - 89.4%

## Projects

- Dec 2019 **Fitness TV**  
*Samsung Research Institute, Delhi*  
Made an app for instructing the user in **achieving a particular pose** which he gets to choose beforehand. The backbone of the app was based on **Posenet Architecture**. Also introduced an **eye-gaze detection** feature to let the user choose an option just by looking at it on the screen.
- Jan 2019 - May 2019 **Fast Feature Enhancement in Low-Light Images**  
*Prof. S. Indu, HoD, Department of Electronics and Communication Engg.*  
Trained a **U-Net based model** to achieve equivalent **picture quality of a long-exposure, high ISO camera setup** in dimly lit conditions and poorly exposed scenes. Further it was fine-tuned to incorporate denoising, deblurring and enhancements which are otherwise obtained by post-processing photography techniques.

## Awards and Accolades

- 2019 **Samsung smarTVision Hackathon**  
*Won **First Prize** for developing a Yoga Trainer App for Smart TV.*
- 2018 **Smart India Hackathon**  
*Won **Second Prize** for developing a solution for efficient tracking and recording of vaccinations in areas with poor network coverage.*