

Sl No.	Project	Title	Problem statement	No. of members
1	Multi Object Tracking Mentor - Basava	Multi Object Tracking in videos	<p>The goal of multi object tracking (MOT) is to estimate the states of multiple objects, such as locations, velocities, and sizes, while maintaining their identifications under appearance and motion variations with time.</p> <p>Approach: Tracking by detection First, all detections are extracted via YOLO, Faster RCNN, and so on. Then, an association algorithm is performed to link these detections to different tracks. Usually, the association algorithm considers motion (direction, speed, ...) information and appearance information.</p>	
2	Caffe2 , MxNet runtime parser Mentor - Sharan	Design and implement caffe2 & Mxnet parser for ARMNN. Optimize execution of pre-trained models	ARMNN (https://github.com/ARM-software/armnn) does not support parsers for various different ML frameworks like Caffe2, MxNet	
3	Compression of OnDevice AI Model Mentor: Sharan	Compression of OnDevice AI Model	<p>Present day AI models are growing into heavier and complex models which are not compatible to be executed in Ondevice environment, hence the need for customization.</p> <p>Customization involves all the following steps:</p> <p>Pruning: To reduce model size by removing operations, weights.</p> <p>Quantization: Bitwise representation of the data with out accuracy loss for improving the inference speed.</p> <p>Ondevice ML specific model: Realizing/supporting the unsupported model.</p>	4

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Trie base retrieval subsystem Mentor: Vanraj	Trie base retrieval subsystem	Retrieval system development which works mostly directly on file system. With this retrieval system RAM can be saved when data size is too huge and can not be loaded in main memory. This is tradeoff of the IO operation (lower speed) with cost of the saving RAM. Compare some of the state of the art and apply new technique for embedded devices	
Display Emoji to enhance text mentor : Vanraj/Parameswaranath	Display Emoji to enhance text	Enhancing the presented text with Emoji. When text is displayed to user find the right emoji which can be used with given text to give rich experience.	2

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Professor Assigned 1	Student Member 1	Student Member 2	Student Member 3	Student Member 4
Priyadarshini Patil				
Sunil V G				
Praveen M D	Vaishno Jha	Vaibhav Hegde	Swathi Agarwal	Shyam Sundar Agarwal

Dr Meena S M				
Shruthi Maralappanavar				