BMS
Institute of Technology and Management

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Top 4 Projects for the Academic Year 2018-19

SL No	Title of the Project	Project Description (not more than 250 Words)	Academic Year	Student Names	Guide Name
1	Emotion Perception using Reinforcement Learning	"Emotion perception from text, speech or visuals using reinforced learning allows decision making. To train a model to make a sequence of decisions from the provided environment, the system uses reinforcement learning to employ all the trials and errors to come up with the emotion-based solution. Hence the motivation to develop an intelligent system using advanced learning algorithms becomes today's necessity. An intelligent system is a machine with an embedded, Internet-connected computer that has the capacity to gather and analyse data and communicate with other systems. Other criteria for intelligent systems include the capacity to learn from experience, security, connectivity, the ability to adapt according to current data and the capacity for remote monitoring and management. When any system claims to be powered by Artificial Intelligence or NLP or	2018-19	Adarsh Kumar Sah Bhargav Sagiraju Chandrashekar S	Dr Thippeswamy G

		Neural Network human like behaviour is achieved through Reinforced Learning which allows the system to make sure calculated decisions. "			
2	NFC-Based Faculty Mobility Tracking System	In this project, we design a Near Field Communication (NFC) based system to administer the faculty of any educational institution. Our NFC based system provides us with a user-friendly way of registering the breaks for faculty. The whole system consists of three components: NFC tags, user base with NFC supported hardware and tag-human interaction. We designed a system that would provide us the mobility information open to the institution.	2018-19	K. Varun Karanth Kunal Kumar Gaurav Raj Abhishek	Dr Bharathi M A
3	Hand Gesture Recognition For Human Computer Interaction	Hand gesture recognition is to interpret the human gestures using certain mathematical algorithms for human computer interaction (HCI). They are widely used in gaming, media player control, robot control etc. It enables the humans to interact with the machine directly without any means of mechanical devices thereby improving the work efficiency of the machine used. It makes it possible for the cursor on the screen to move accordingly by just pointing our finger. Hand gesture recognition plays an important role as it helps in the development of human centered human-computer interaction. In our project hand	2018-19	Kanya Krishi Meghana M Mohammed Daaniyal Abhishek B	Dr Anupama H S

		gestures are used to train the model and perform certain actions like scrolling down a page, scrolling up a page, zooming in, and zooming out of a portable document format (PDF). A convolutional neural network (CNN) is trained for these gestures and the corresponding action is performed using PyAutoGUI. The model has an accuracy of 99.94% on the training dataset and an accuracy of 92% on the test dataset.			
4	Artificial neural network technique for real time traffic light detection by automated vehicles	The developed project makes use of machine learning techniques in order to accomplish the task of traffic light detection in real time. A model has been built in order to classify and predict the traffic lights present in the dataset images. Training the model and testing it for its accuracy are the main tasks involved in machine learning. In order to perform training and testing, a dataset is required. In this project, the Bosch Small Traffic Lights Dataset has been adopted in order to train the model that has been designed and test its working. This dataset consists of 8000 plus images, that have been acquired in real time. Hence, this dataset was found to be highly appropriate for this project, due to which it has been used in order to train and test the designed model. This dataset is the largest publicly available traffic light dataset that has been published by Bosch. The model first performs image classification, followed by training. The trained model is then tested with	2018-19	P Vignesh Radhika B Raman Ullas V B	Dr. Satish Kumar T

		the test dataset in order to analyse the accuracy and performance, after which prediction is performed.			