Mohit Yadav

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Education

Bachelors in Engineering (Honours) Computer Science	CGPA:8.99/10	
Birla Institute of Technology and Science, Pilani	2014-current	
CBSE(XII)	95.4%	
Apeejay School ,Kharghar	2014	
CBSE(X)	CGPA:10/10	
Apeejay School,Kharghar	2012	

Research Interests

- Artificial Intelligence
- Machine Learning
- Robotics

Electives

- Image Processing
- Machine Learning
- Neural Networks and Fuzzy Logic
- Data Mining

Online Courses

- Artificial Intelligence for Robotics(Udacity)
- Machine Learning Foundations: A Case Study Approach(Coursera)
- Control of mobile robots

Internships

Developer for Geoscience DataCube,ISRO	May 2016-July-2016

- Guide:Dr Sameer Saran , Scientist , Geoinformatics Division , Indian Institute of Remote Sensing,Dehradun
- Geoscience Data Cube provides an integrated gridded data analysis environment for decades of analysis ready earth observation satellite.
- Developed a working prototype for ISRO based on the Australian Geoscience Data Cube.
- I was responsible for developing archival and retreival system for large size geospatial data,preprocessing module and analysis module.
- Prototype currently being succesfully used in IIRS.

Projects

BITS LifeGuard – Driver Safety Jacket	Oct 2015 – Apr 2016

Guide: Prof. Rahul Banerjee, Head of Department, Computer Science Engineering, BITS Pilani

This research project aims to protect human lives from those road accidents that result from inordinate levels of fatigue (physical/mental), poor physical fitness, drug-induced sleepiness, excessive stress etc. which could cause sharp degradation in the reflex level of the vehicular driver. Currently, it focuses on light vehicles and their drivers/occupants. However, the concept is easily extensible to large vehicles and their drivers/occupants as well. This research also draws from the works done by life scientists on human sensory system, brain and select externally measurable parameters (that can be measured, calibrated or accurately estimated without surgical intervention).

- Worked on reverse geocoding to approximate user location and select corresponding regional settings.
- Worked on the speech and audio synthesis part of the project. Various open source speech synthesis softwares were used such as Google TTS and audio stitching using python libraries such as pydub and pyAudio.
- The latter part of the project focused on the machine learning techniques as well as sensor fusion techniques .I worked on decision fusion techniques (dempster-shafer methods etc).

Speeding Up Multi-Robot exploration by background information manipulation	Apr 2016 - current

- Using previous information about exploration site to speed up robot exploration.
- Implementing above in a multi-robot system.
- Currently working on automatic node production for exploration purposes and priority assignment of frontiers.

The Fall Detector	Mar 2016

- The fall detector was used as an alert system which could be used in case of emergencies faced when someone aged experiences a sudden fall.
- The components used were Texas Instrument's IOT Kit which included the CC3200 Launchpad
- Fall detection algorithm was used to detect sudden falls and as soon as a fall was detected by the system a signal was sent on the cloud which intern used to send a message to the concerned person
- Worked on the designing of the circuit as well as coding on the Energia interface

Technical Skills

- Programming Languages: C, C++, Java, Python, Shell script, LaTeX,Prolog
- Databases: MySQL
- Data Analysis Packages: IBM SPSS
- Others: ROS

Achievements

-Recipient of MeritCumNeed Scholarship from BITS for excellence in Academics	2014
-Awarded the Government of India INSPIRE scholarship	2014
-CBSE class XII top 1 percentile	2014
-CBSE Class X School Topper	2012

Member of one of the top 8 teams in Texas Instruments Internet of Things Challenge	2016
Project selected as one amongst the top 8 in the Problem Statement of Schneider Electric's IOT theme in APOGEE Innovation challenge at APOGEE 2016.	2016

Positions of Responsibility

School Prefect	2014

- School prefect of one of four houses in school.
- Responsible for handling school competions and leading my house as a leader in various inter-house competition.
- Won best house of the year during my tenure.

Team Robcon BITS Pilani , Electronics Head	2015-2016

- Head of electronics module
- Responsible for directing the electronics team and taking various design decisions regarding electronics and pcb design.
- PCB designer

Team Robon BITS Pilani , Treasurer	2015-2016

- Responsible for maintaining financial record of the club