MANAN MADAN

Projects

LEARNING PERSPECTIVES | GROUPING STUDENTS BASED ON NOTES [link]
➔ Keyword extraction using POS Tagging and Chunking
➔ Used K-Means, K-Modes clustering of categorical data (keywords)
➔ Used one-hot encoding to encode the keywords.

LANE DETECTION | LANE DETECTION USING DASH-CAM FOOTAGE [link]
➔ Lane Detection using Canny Edge Detection, masking, and contour detection from the footage of the DASH-CAM of the car using OpenCV.

UNSUPERVISED TEST | AI-PROCTORING SYSTEM [link]
➔ Implemented User authentication using Face Verification System
➔ Developed a GUI for taking a test using Tkinter
➔ Implemented features like mouse tracking for fraud detection

WIKIGRAPH | TURNING WIKIDATA INTO BEAUTIFUL GRAPHS [link]
➔ Implemented Web Scraping on WIki Data using requests
➔ Learned SPARQL for interacting with wiki data's database
➔ Graph Manipulation using networkx

KINO-PLANNING | PATH PLANNING ALGORITHM [link]
➔ Implemented a path planner inspired from A*path planning algorithm, but considers robot's kinodynamic constraints while planning a path from point A to point B.
➔ Implemented it on Team ARES Rover, to achieve stable navigation b/w obstacles

Work Experience

NSIT,Delhi | Research Intern
May 2020 - July 2020
● Implement several clustering algorithms for clustering real-world categorical data
● Studied and implemented different types of encoding and decoding techniques to process data
● Worked on several algorithms and tools for natural language processing and web-scraping such as chunking, chinking, regex parser , etc.

Team ARES Robotics, Delhi | Software Lead
August 2018 - Present
● Implemented full ROS navigation stack on simulation as well as on hardware platform
● Coded an autonomous differential drive robot with various sensors such as Depth Camera, IMU, GPS, from scratch in Gazebo.

Education

Netaji Subhas Institute of Technology, Delhi
University of Delhi
2018-2022

BE Instrumentation and Control
CGPA - 7.67 (Upto 4th sem)

Contact

Phone: 8929250041
Email: madan.manan1@gmail.com
Visit: github.com/mananmadan
LinkedIn: manan-madan-646950167

Skills

Languages: C,C++,Python
Robotics: ROS, Gazebo,Sensor Fusion, Kalman Filters, OpenCV, Perception,Path Planning
Frameworks: NLTK, Spacy, Pandas, Matplotlib, Networkx, BeautifulSoup, TextBlob, Regex

Certifications

C++ and Data Structures: Coding Ninjas
Competitive Programming: Coding Blocks
Algorithmic Toolbox: UCSD
Algorithms and Data Structure: UCSD
Algorithms on Graph : UCSD
Arduino Programming : Udemy
Machine Leaning : Stanford
Deep Learning : deeplearning.ai

Achievements and Awards

> Came in 10th place in Indian Rover Championship 2019
> Qualified for European rover championship 2019
> Top 1% in JEE Advanced 2018