

Some Problems undertaken by TiHAN - IITH

S. No	Problem Area/details	Name of line ministries/States Govt/PSUs/industries	Collaborating TIH	Collaborating Partner other than TIH	Projects undertaken	Technology/product developed (Current status)	Any other update
1.	Speech, Video and Text Analytics	Department of School Education and Literacy, Ministry of Education, Government of India.	-	TiHAN - IIIT Dharwad	Speech, Video and Text Analytics in Humanoid Robots	Autonomous Humanoid Robot	Current Status - Ongoing
2.	Speech, Video and Text Analytics	Department of School Education and Literacy, Ministry of Education, Government of India.	-	TiHAN - IIIT Dharwad	Applications of Autonomous Navigation for Industry, Power and Fire Safety with study of legal and ethical aspects	Autonomous Navigation of Humanoid Robot	Current Status - Ongoing
3.	Autonomous Navigation and Data Acquisition Systems (UAVs, RoVs etc)	Ministry of Heavy Industries, Government of India.	-	TiHAN - International Centre for Automotive Technology (ICAT) India.	Autonomous Vehicle Development in Indian Context	Autonomous Ground Vehicles (AGVs)	Current Status - Ongoing
4.	Autonomous Navigation and Data Acquisition Systems (UAVs, RoVs etc)	Ministry of Heavy Industries, Government of India.	-	TiHAN - Automotive Research Association of India (ARAI), India.	ADAS Standard Development for Autonomous Vehicles in Indian Context	Autonomous Ground Vehicles (AGVs)	Current Status - Ongoing

5.	Autonomous Navigation and Data Acquisition Systems (UAVs, RoVs etc)	International Crops Research Institute for the Semi-Arid Tropics (ICRISAT)	-	TiHAN - ICRISAT Hyderabad	Leveraging the UAV-based technology for data collection.	Unmanned Aerial Vehicles (UAVs)	Current Status - Ongoing
6.	Autonomous Navigation and Data Acquisition Systems (UAVs, RoVs etc)	Intelligence Bureau (Ministry of Home Affairs), Government of India	-	TiHAN - IIIT Sricity	Advanced Aerial Mapping (AAM) Rider: Yield Detection System for Mango Farms using UAVs	Unmanned Aerial Vehicles (UAVs)	Current Status - Ongoing
7.	Autonomous Navigation and Data Acquisition Systems (UAVs, RoVs etc)	Intelligence Bureau (Ministry of Home Affairs), Government of India	-	TiHAN - IIIT Hyderabad	Embedded system-based fault-tolerant control and autonomous navigation of an unmanned aerial vehicle (UAV)	Unmanned Aerial Vehicles (UAVs)	Current Status - Ongoing
8.	Autonomous Navigation and Data Acquisition Systems (UAVs, RoVs etc)	Intelligence Bureau (Ministry of Home Affairs), Government of India	-	TiHAN - IIITDM Kanchipuram	Visibility Enhancement Algorithm for Vision Intelligence System based on Environment Visibility Conditions	Unmanned Aerial Vehicles (UAVs)	Current Status - Ongoing

9.	Autonomous Navigation and Data Acquisition Systems (UAVs, RoVs etc)	Intelligence Bureau (Ministry of Home Affairs), Government of India	-	TiHAN - IIIT Hyderabad	Design, development, and deployment of energy-efficient smart EDGE devices for real-time traffic flow prediction and control.	Autonomous Ground Vehicles (AGVs)	Current Status - Ongoing
10.	Autonomous Navigation and Data Acquisition Systems (UAVs, RoVs etc)	Intelligence Bureau (Ministry of Home Affairs), Government of India.	-	TiHAN - Centre for Development of Advanced Computing(C-DAC) Hyderabad	5G C-V2X Platform for On-Road Vehicles (PROVE)	Connected Autonomous Vehicles	Current Status - Ongoing
11.	Autonomous Navigation and Data Acquisition Systems (UAVs, RoVs etc)	Intelligence Bureau (Ministry of Home Affairs), Government of India.	-	TiHAN - Centre for Development of Advanced Computing(C-DAC) Strategic Electronics Group (SEG) Thiruvananthapuram	Portable Autonomous Surface Vehicle (PASV)	Autonomous Surface Vehicles	Current Status - Ongoing
12.	Autonomous Navigation and Data Acquisition Systems (UAVs, RoVs etc)	Council of Scientific and Industrial Research (CSIR)	-	National Aerospace Laboratories (NAL) Bengaluru	Autonomous Bioinspired Flight Development	Autonomous Bioinspired Unmanned Aerial Vehicles (UAVs)	Current Status - Project Proposal Stage
13.	Autonomous Navigation and Data Acquisition Systems (UAVs, RoVs etc)	Council of Scientific and Industrial Research (CSIR)	-	National Aerospace Laboratories (NAL) Bengaluru	Experimental Study of Aerodynamics of Bioinspired Flight in Wind Tunnel Facility.	Flapping Wing Micro/Nano Aerial Vehicles (UAVs)	Current Status - Project Proposal Stage

14.	Autonomous Navigation and Data Acquisition Systems (UAVs, RoVs etc)	Council of Scientific and Industrial Research (CSIR)	-	National Aerospace Laboratories (NAL) Bengaluru	Hydrodynamics of Bioinspired Unmanned Underwater Vehicles (UUVs) in Water Tunnel Facility.	Bioinspired Unmanned Underwater Vehicles (UUVs)	Current Status - Project Proposal Stage
15.	Autonomous Navigation and Data Acquisition Systems (UAVs, RoVs etc)	Ministry of Home Affairs, Government of India.	-	Border Security Force (BSF)	Anti-drone Detection and Neutralization, Identification of Tunnels	Unmanned Aerial Vehicles (UAVs) and Unmanned Ground Vehicle (UGVs)	Current Status - Project Proposal Stage
16.	Autonomous Navigation and Data Acquisition Systems (UAVs, RoVs etc)	Ministry of Home, Affairs, Government of India.	-	Border Security Force (BSF)	Heavy Payload Cargo Drones	Unmanned Aerial Vehicles (UAVs)	Current Status - Project Proposal Stage
17.	Autonomous Navigation and Data Acquisition Systems (UAVs, RoVs etc)	Ministry of Home, Affairs, Government of India.	--	Border Security Force (BSF)	Underground Tunnel Detection, Surveillance	Unmanned Aerial Vehicles (UAVs) and Unmanned Ground Vehicle (UGVs)	Current Status - Project Proposal Stage
18.	Autonomous Navigation and Data Acquisition Systems (UAVs, RoVs etc)	DRDO – Young Scientist Laboratory (DYSL)	-	-	Autonomous Nano/Micro Unmanned Aerial Vehicles (UAVs)	Unmanned Aerial Vehicles (UAVs) and Unmanned Ground Vehicle (UGVs)	Current Status - Project Proposal Stage
19.	Autonomous Navigation and Data Acquisition Systems (UAVs, RoVs etc)	DRDO - Centre for Artificial Intelligence and Robotics	-	-	Autonomous Ground Vehicles	Unmanned Aerial Vehicles (UAVs) and Unmanned Ground Vehicle (UGVs)	Current Status - Project Proposal Stage

20.	Autonomous Navigation and Data Acquisition Systems (UAVs, RoVs etc)	Government of Telangana	-	-	Autonomous Fire Fighting Unmanned Ground Vehicles (UGVs)	Unmanned Aerial Vehicles (UAVs) and Unmanned Ground Vehicle (UGVs)	Current Status - Project Proposal Stage
21.	Autonomous Navigation and Data Acquisition Systems (UAVs, RoVs etc)	Government of Telangana - Telangana AI Mission	-	-	Pothole Detection	Unmanned Aerial Vehicles (UGVs)	Current Status - Project Proposal Stage
22.	Speech, Video and Text Analytics	Intelligence Bureau (Ministry of Home Affairs), Government of India.	-	TiHAN - IIT Hyderabad	Smart Cities CCTV Installations	Computer Vision Related Problems	Current Status - Project Proposal Stage