



NOTIFICATION

Date: 02/09/2022

‘AVISHKAR IDEATHON 2022’ PRESENTATION COMPETITION

To inculcate a research culture among students, encourage original and novel thinking, and to provide an opportunity for expression of academic talent, MMIT Institution Innovation Council (IIC) cell organizes the Avishkar Poster Competition. MMIT is organizing ‘**AVISHKAR IDEATHON 2022**’ at Institute level on 15th September, 2022. All eligible faculties and students are invited to participate in the competition. Students from all branches and years are considered for this competition.

The department faculty coordinators are assigned for participant registration. The guideline and registration details are attached herewith.

Students can contact the department faculty coordinator for the registration.

Department	Name of Faculty	Contact Number
Civil Engineering	Prof. Rajendra Raut	+91- 9960911247
Mechanical Engineering	Prof. Rohit Polas	+91- 7841982059
Mechatronics Engineering	Prof. Sonali Patil	+91- 8888557396
Computer Engineering	Prof. Vikas Chauhan	+91- 9404878999

Prof. A. S. Bhanage
President, IIC

Copy for information and necessary action to:

1. All Heads of Departments and Deans
2. All concerned teaching and non-teaching staff
3. NAAC/NBA/IQAC



‘AVISHKAR IDEATHON 2022’ PRESENTATION COMPETITION

Aims and Objectives of ‘AVISHKAR IDEATHON 2022’:

- To inculcate research culture among students. To encourage original and novel thinking.
- To provide an opportunity for expression of academic talent.
- To promote interaction among academia, R & D Institutes and Industries.

Guidelines of the participants:

1. Projects can be in the form of live demonstration /models / posters and should be based on innovative ideas.
2. An abstract in maximum 300 words (A4 paper, Times New Roman, 12 size) including aims, objectives, methodology, findings etc. should accompany each entry. Shortlisted candidates have to submit the full-length paper and it should be around 3000 words including aims, objectives, methodology, findings etc. Use only Times New Roman script font size 12 with 1.5-line spacing, margin 1” for all sides.
3. Maximum number of participants representing each Poster/Model is restricted to two only, however only one student is allowed to present his / her research project.
4. In the first round, all contestants are expected to display & present orally their posters (size 1m x 1m).
5. There shall be no registration fees for participation in the event.

List of Participating Students - Avishkar 2022 Competition

Sr. No.	Name of Student	Branch	Level	Title of Project
1.	Miss. Sejal Zarekar	Computer	UG	Farmer Guide using IoT
2.	Mr. Mahesh Babar	Computer	UG	Farmer Guide using IoT
3.	Mr. Suyash Kusumkar	Computer	UG	An Automatic Vehicle Accident Detection
4.	Miss. Mansi Kodgire	Computer	UG	An Automatic Vehicle Accident Detection
5.	Mr. Vishwajeet Bhalere	Computer	UG	Regenerative Agriculture
6.	Mr. Shivam Rahinj	Computer	UG	Regenerative Agriculture
7.	Mr. Akshay Lavhaji Patil	Computer	UG	Algorithm Visualizer
8.	Mr. Abhinav Mishra	Computer	UG	Algorithm Visualizer
9.	Mr. Dhiraj Pandey	Mechanical	UG	Design and Fabrication of Pick and Place Robotic Arm with 4DOF
10.	Mr. Onkar Saraf	Mechanical	UG	Design and Fabrication of Pick and Place Robotic Arm with 4DOF
11.	Mr. Atharv Etane	Mechanical	UG	Railway track crack detection system
12.	Mr. Chinmay Dhande	Mechanical	UG	Railway track crack detection system
13.	Mr. Kundan Ghugul	Mechanical	UG	Programmable Surface Cleaning Robot
14.	Mr. Chaitanya Kurkure	Mechanical	UG	Programmable Surface Cleaning Robot
15.	Mr. Bhagesh Chincholi	Mechanical	UG	Design and Development of Onion Cold Storage
16.	Mr. Akshay Shinde	Mechanical	UG	Design and Development of Onion Cold Storage
17.	Mr. Kaustubh Atkire	Mechanical	UG	Renewable and Green Energy
18.	Mr. Shubham Nikam	Mechanical	UG	Renewable and Green Energy
19.	Mr. Abhishek Lad	Mechanical	UG	Future of Electric Vehicle
20.	Mr. Meher Bablu	Mechanical	UG	Future of Electric Vehicle
21.	Mr. Sagar Matkar	Mechanical	UG	Economic Room Air Purifier
22.	Mr. Rutvik Mutkule	Mechanical	UG	Economic Room Air Purifier
23.	Mr. Abhijeet Shingote	Mechatronics	UG	CNG Gas Leakage Detection
24.	Miss. Sharayu Malekar	Mechatronics	UG	CNG Gas Leakage Detection
25.	Mr. Yashraj Palande	Mechatronics	UG	Magnetic Automotive Charging System
26.	Mr. Akansha Dhore	Mechatronics	UG	Magnetic Automotive Charging System
27.	Mr. Adilsha Mujawar	Civil	UG	Smart City
28.	Miss. Sheetal Kamble	Civil	UG	Green Energy

Photograph



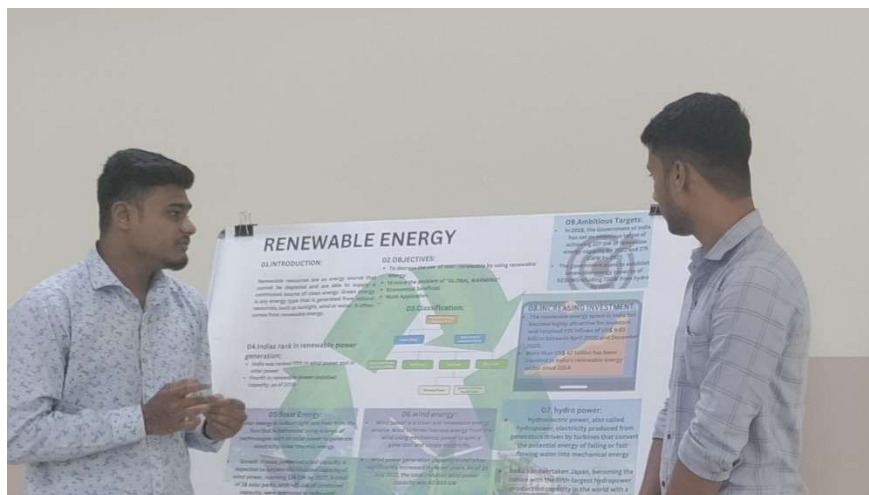
Inauguration Ceremony and details of participant as per department



Guidelines about Avishkar Competition and Evolution system



Student Poster Presentation



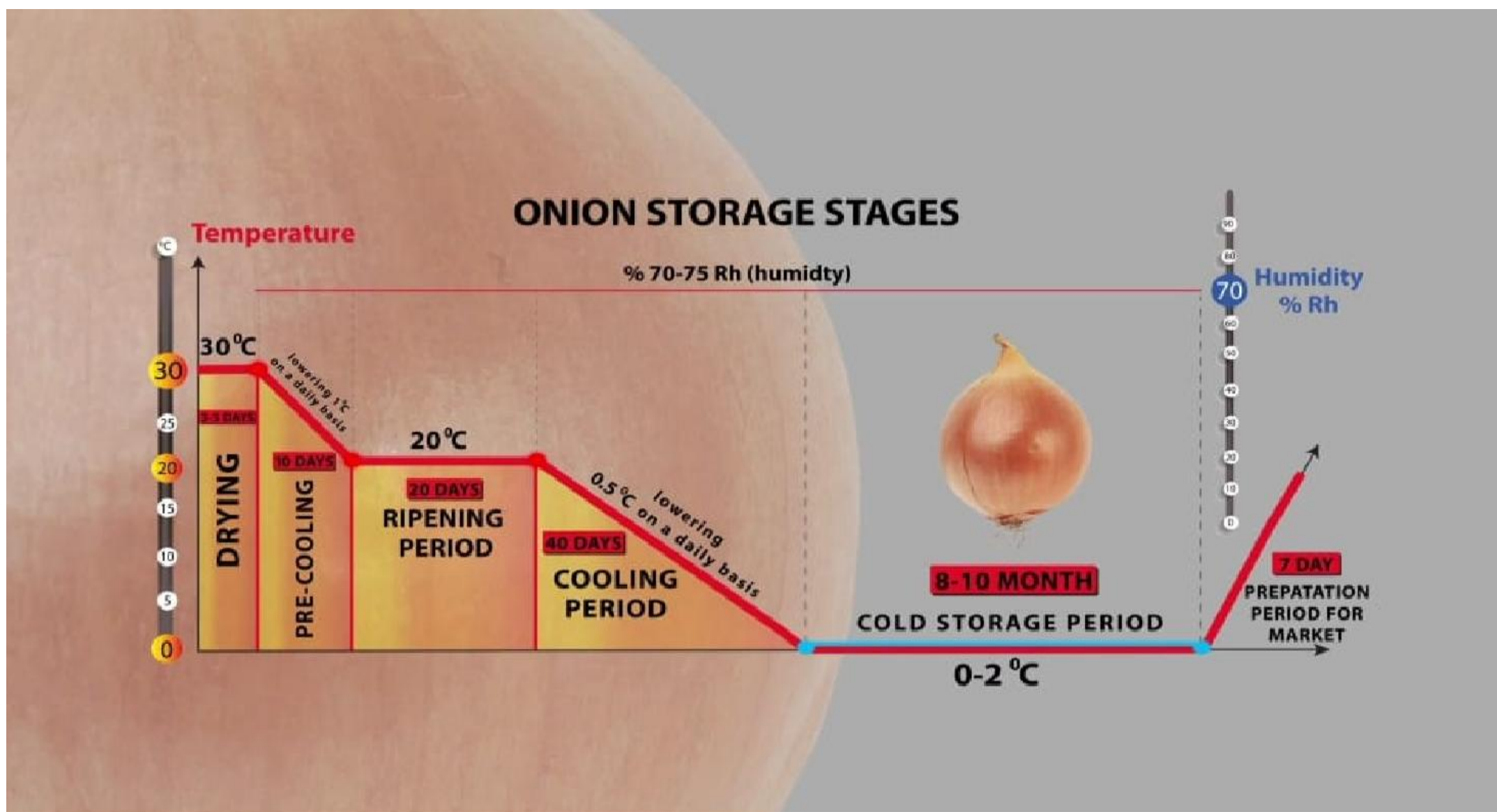
Student Poster Presentation

Design and Development of Onion Cold Storage System

Introduction:

- India is the second largest producer of onion.
- In india ,onions are cultivated under the tropical areas, where nearly about half of cultivated onions damage out of their total production because of certain losses which can be avoided by temperature and humidity control.
- Thus, our aim is to design proper and adequate storage which will bring relief to farmer.

Architecture:



Motivation:

As per our design and calculation based on onion storage capacity we can expect a sound less amount of budget for this technique of onion preservation which is very less compared to other systems.

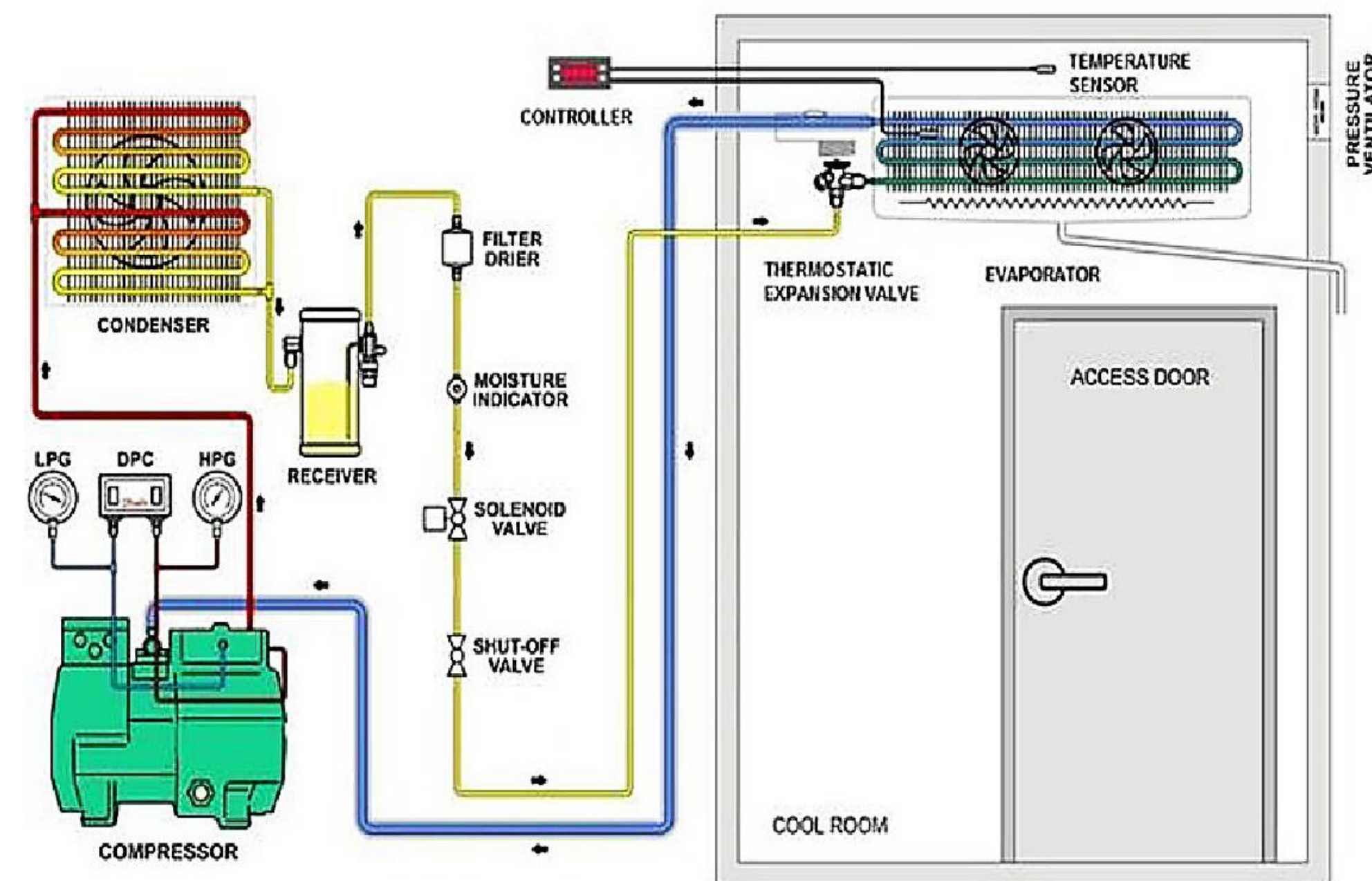
- We are focusing on the good life of onions by making this project which contains mainly parts are
 - Compressor
 - Condesner
 - Evaporator
 - Moisture Indicator
 - Solenoid & Shutoff Valves
 - Ventilator
 - Temperture Sensor

Objective:

The present work aims at design and development of cold storage system. The main intention of this project is to increase the life of onions by its proper preservation and taking care post harvesting.

- Study of onion life and environmental effects on it.
- Designing of cold Storage System.
- Design of component of system for cold storage system.
- Fabrication, modelling and assembly of system.
- Testing of system.

Block Diagram:



Conclusion:

As we gone through overall study india is leading country in production of onion as well as leading in expert of onion too. Our cold storage system of onion can helpful for farmers to store onions.

- Onions can be store upto 6 to 9 months.
- Quality can be maintained easily.
- Reduced cost of chamber compared to other techniques of storage.



An Automatic Car / Vehicle Accident Detection

ABSTRACT

Car accidents cause a large number of deaths and disabilities every day, a certain proportion of which result from untimely treatment and secondary accidents. To some extent, automatic car accident detection can shorten response time of rescue agencies and vehicles around accidents to improve rescue efficiency and traffic safety level.

First of all, a novel image dataset CAD-CVIS is established to improve accuracy of accident detection based on intelligent roadside devices in CVIS. Especially, CAD-CVIS is consisted of various kinds of accident types, weather conditions and accident location, which can improve self-adaptability of accident detection methods among different traffic situations. Secondly, we develop a deep neural network model YOLO-CA based on CAD-CVIS and deep learning algorithms to detect accident. In the model, we utilize Multi-Scale Feature Fusion (MSFF) and loss function with dynamic weights to enhance performance of detecting small objects. Finally, our experiment study evaluates performance of YOLO-CA for detecting car accidents, and the results show that our proposed method can detect car accident in 0.0461 seconds (21.6FPS) with 90.02% average precision (AP). In additionally, we compare YOLO-CA with other object detection models, and the results demonstrate the comprehensive performance improvement on the accuracy and real-time over other models.

CONTACT

<your name>
<organization name>
Email:
Phone:
Website:

INTRODUCTION

According to the World Health Organization, there are about 1.35 million deaths and 20-50 million injuries as a result of the car accident globally every year. Especially, a certain proportion of deaths and injuries are due to untimely treatment and secondary accidents, which results from that rescue agency and vehicles around accident cannot obtain quick response about the accident. Therefore, it is vital important to develop an efficient accident detection method, which can significantly reduce both the number of deaths and injuries as well as the impact and severity of accidents . Under this background, many fundamental projects and studies to develop efficient detection method have been launched for developing and testing.

The traditional methods utilize vehicle motion parameters captured by vehicular GPS devices to detect car accident, such as acceleration and velocity. However, these methods based on single type of features cannot meet the performance need of accident detection in the aspect of accuracy and real-time.

METHODS AND MATERIALS

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To change the font style of this text box: Click on the border once to highlight the entire text box, then select a different font or font size that suits you. This text is Calibri 30pt and is easily read up to 5 feet away on a 1m x 1m poster.

Zoom out to 100% to preview what this will look like on your printed poster.

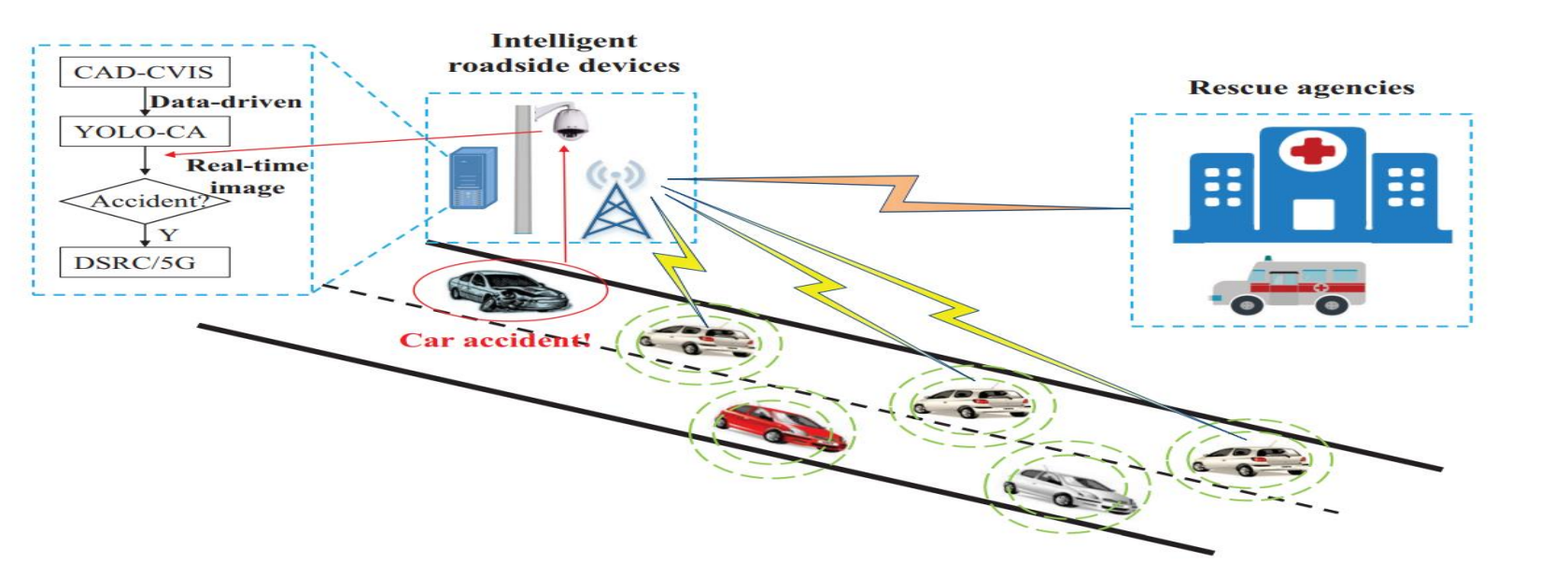


Figure 1

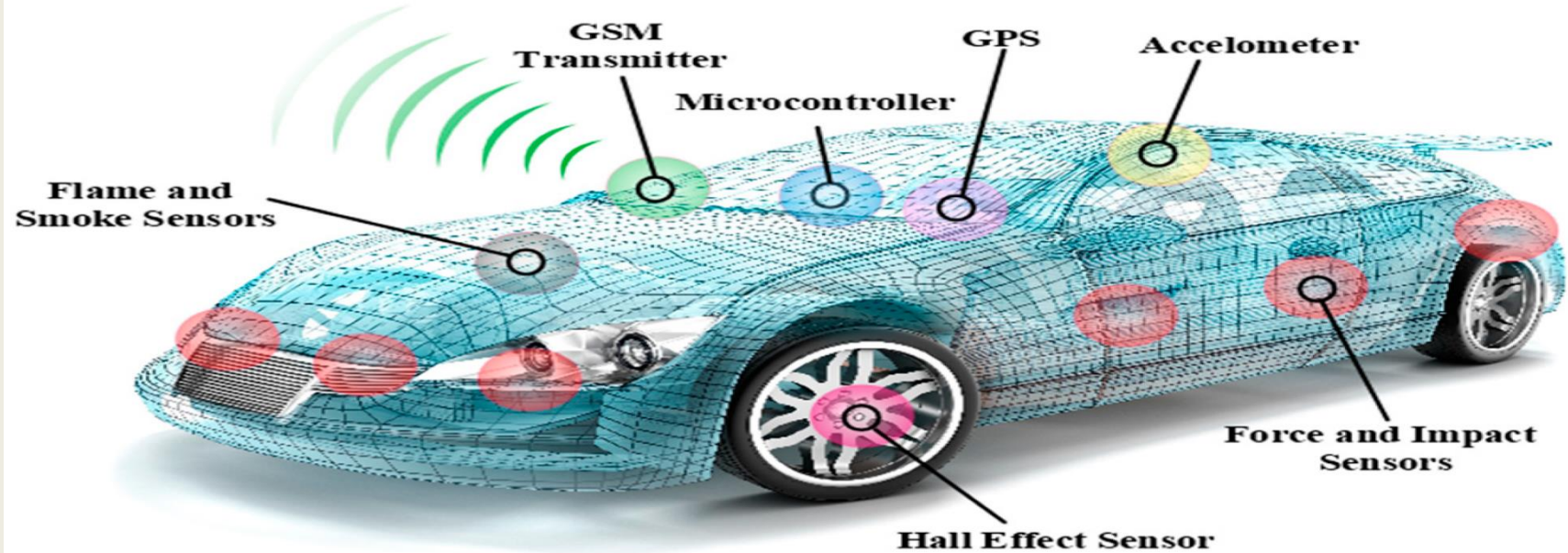


Figure 2

SUMMARY ANALYSIS

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Speaking of Results, yours will look better if you remember to run a spell-check on your poster! After you’ve added your content click on **Review, Spelling**, or press F7.

Figure 3 . The detection principle

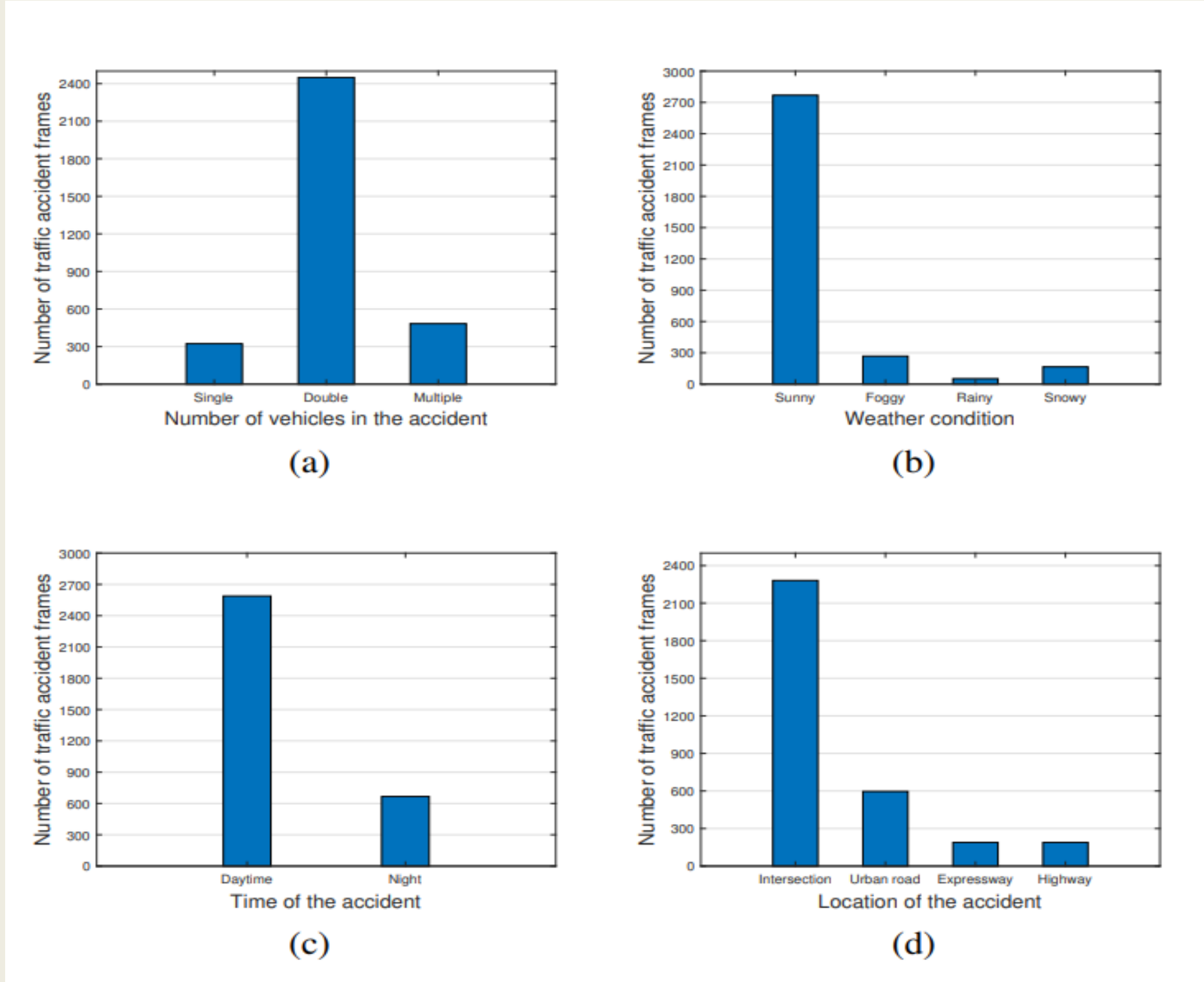
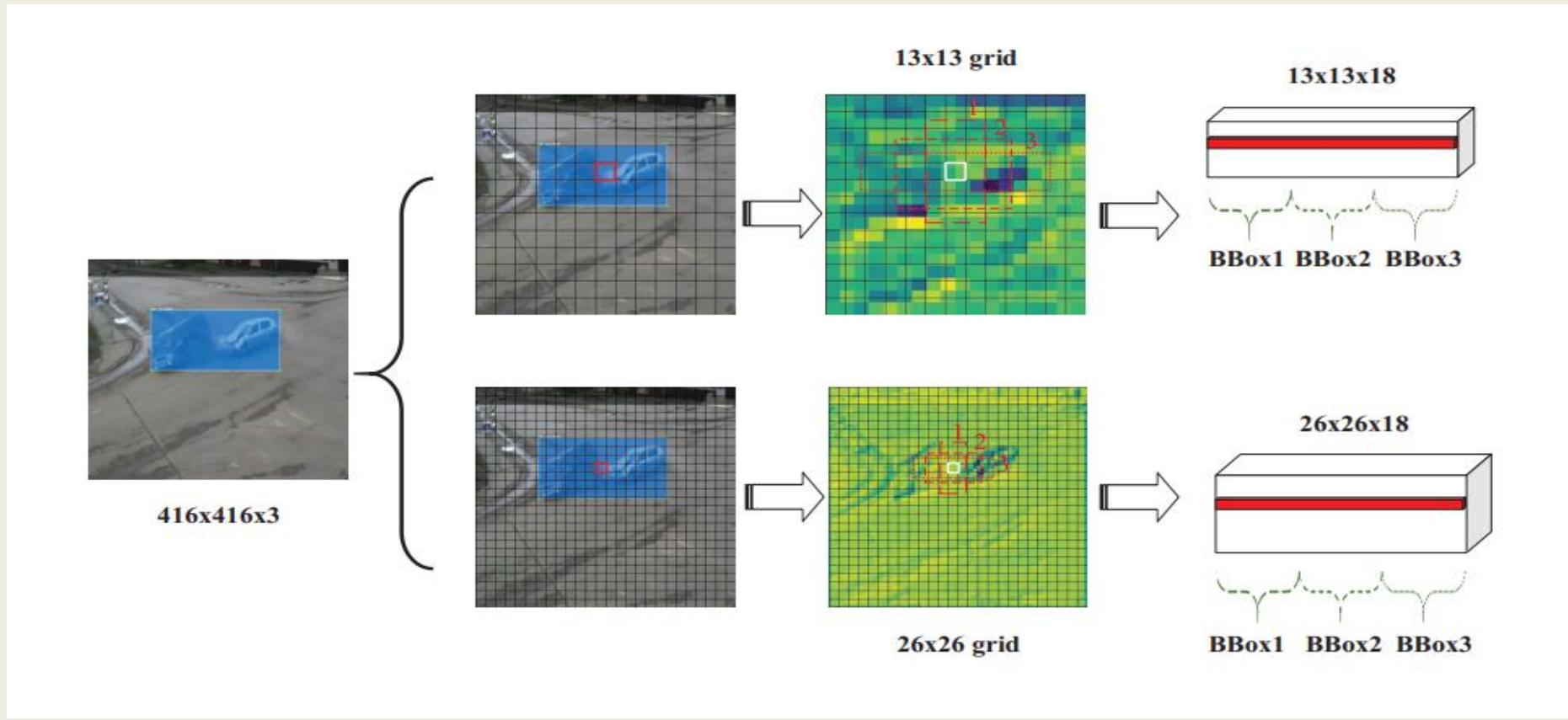


Chart 1. Number of accident frames in CAD-CVIS categorized by different indexes. (a) Accident Type (b) Weather condition (c) Accident time (d) Accident location TABLE 1.

PRODUCTS AND DISCUSSION

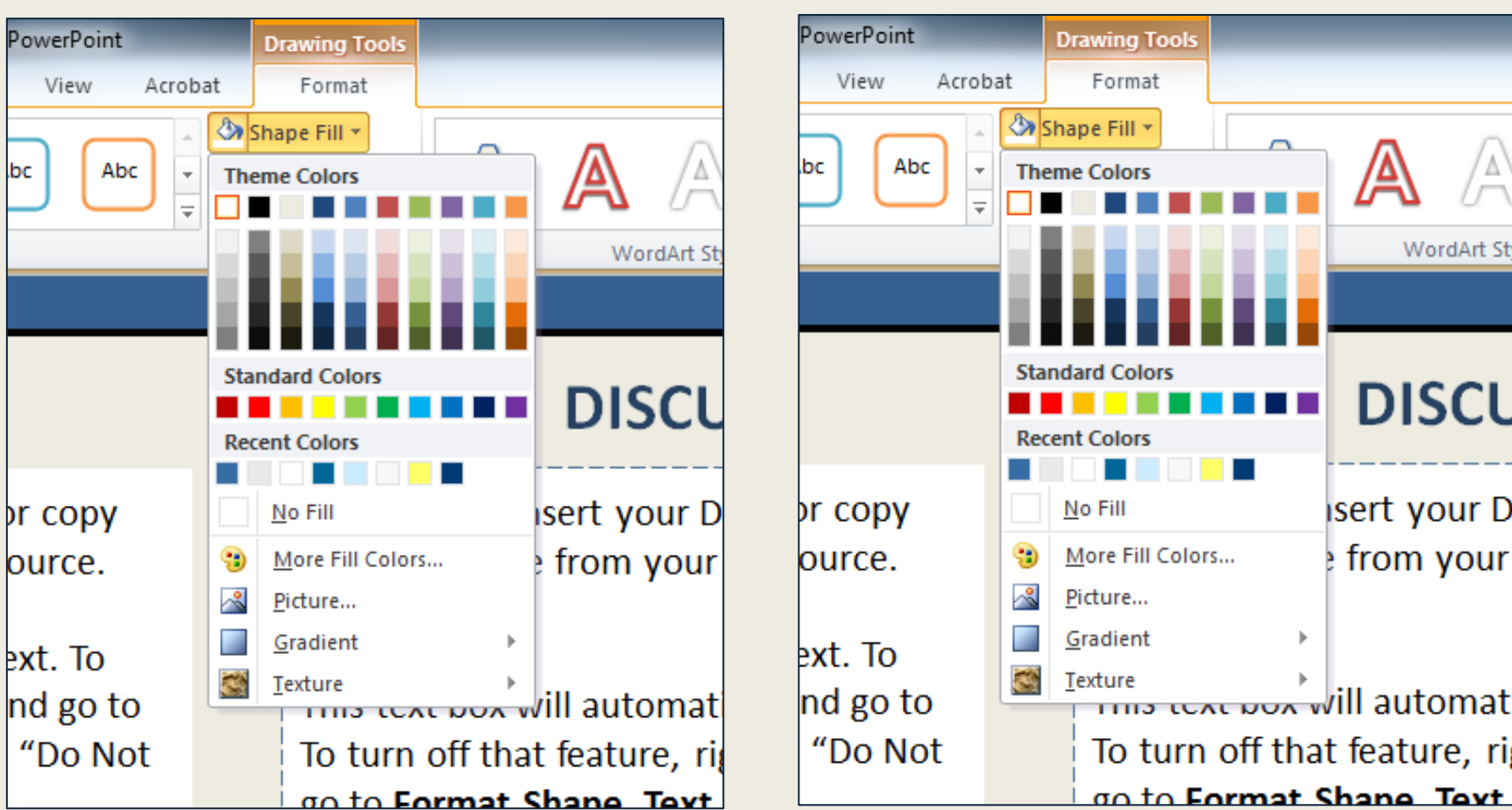
Click here to insert your Discussion text. Type it in or copy and paste from your Word document or other source.

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Zoom out to 100% to preview what this will look like on your printed poster.

To change the background color of any text box, click once on the box so it is outlined with a dashed border. Then select **Shape Fill** from the **Drawing Tools, Format** tab on the ribbon bar above. It’s the one with the ‘paint can’ icon.



CONCLUSIONS

Click here to insert your Conclusions text. Type it in or copy and paste from your Word document or other source.

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REFERENCES

- Click here to insert your References. Type it in or copy and paste from your Word document or other source.
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Abstract of Shortlisted Students

Team 01:

Title of Project	An Automatic Vehicle Accident Detection
Name of Students	Mr. Suyash Kusumkar, Miss. Mansi Kodgire
Abstract in 100 words	
<p>A significant share of the deaths and disabilities resulting from automobile accidents nowadays are due to subsequent accidents or poorly timed medical interventions. Automatic car accident detection can reduce the reaction time of rescue agencies and cars near accidents, improving rescue effectiveness and traffic safety levels. In this study, a vehicle infrastructure system and machine vision-based automated method is used for detecting automobile accidents. Multi-scale feature function and loss function with dynamic weights are utilised to improve small item detection. However, these single-feature approaches cannot match the precision and real-time needs of accident detection.</p>	

Team 02:

Title of Project	Design and Development of Onion Cold Storage
Name of Students	Mr. Bhagesh Chincholi, Mr. Akshay Shinde
Abstract in 100 words	
<p>In India, onions are cultivated in tropical areas because of certain losses which can be avoided by temperature and humidity control. The aim is to design and develop an onion cold storage, which will bring relief to the farmer by increasing the shelf life of the onion. It considers various aspects of the design, analysis, and modification of cold storage which focuses on controlling the temperature and humidity of onions by using a dehumidification process. CFD analysis is used to acquire velocity flow and heat flow pattern inside the cold storage, which helps calculate heat load.</p>	