# AUTONOMOUS DRONE CONTROL

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## Abstract

In recent years, drone technology shows itself in many areas. For example, it is no longer impossible to see drones flying in the air in the world of journalism and show, cargo distribution, agriculture, and emergency situations. Drones are unmanned aerial vehicles. We designed a system that safely able to detect previously defined obstacles and reach the target.

## Introduction

Drones are robots that can be controlled by remote control or fly automatically under the control of various software added to their embedded systems.
The aim of this study is to develop obstacle recognition skills for unmanned aerial vehicles by using Image Processing and Artificial Intelligence methods and in this direction, enabling drones to find their position by detecting the objects around them on autopilot.

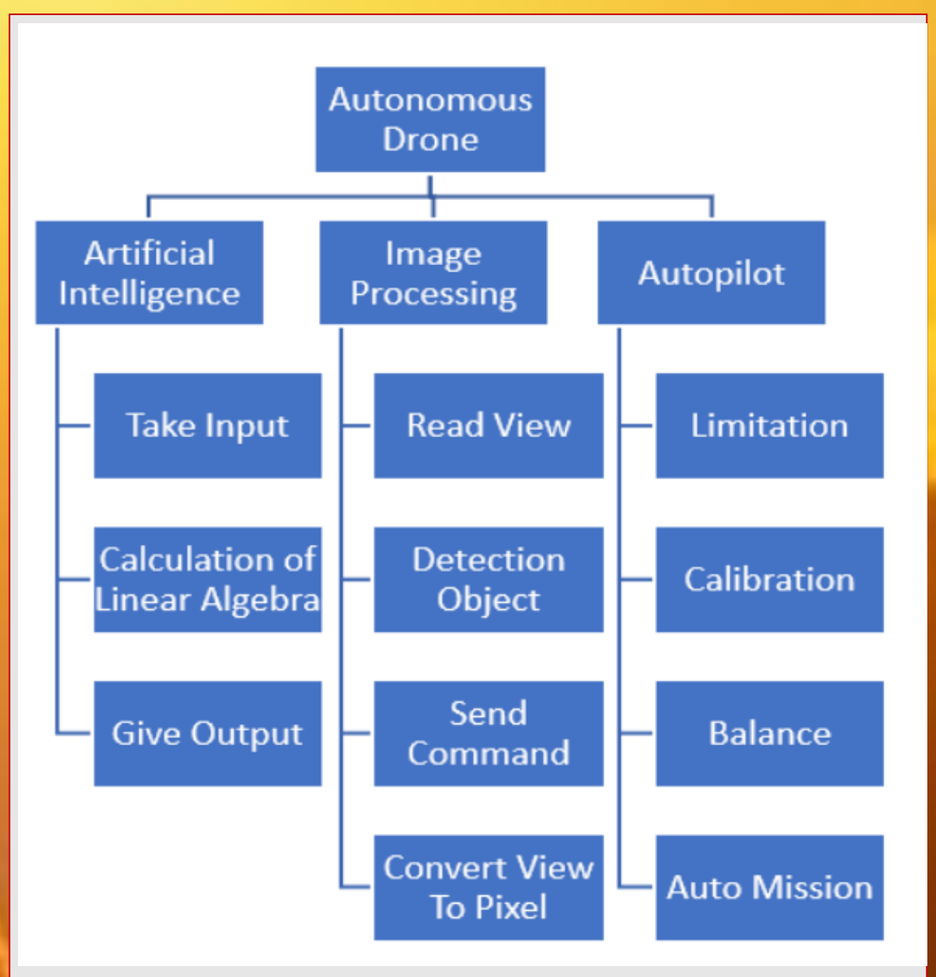


**Figure 1 – Decomposite Diagram**

**Figure 2 – Finished Product**

## Solution

With the image processing and artificial intelligence technologies we use, we designed a system that can recognize previously learned objects, change its direction without hitting these obstacles, and fly safely.

## Company Info

SODER Information Technologies is a company that aims to exist in the sector with its reliability and quality, by producing solutions suitable for different customer needs with its expert technical personnel with knowledge in different technologies, quality products and services.

## Results & Conclusion

We developed possible obstacle models for drones using Image Processing and Artificial Intelligence techniques, and enabled the drones to overcome these obstacles with autopilot and reach the target location.
We achieved a high confidence score in object detection. We also successfully performed PID, Flight, SDK, Calibration tests.
As a result, our system has achieved its main purpose, which is to make life easier and safer for people who want to use these systems.

## Acknowledgement

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**Team Members**