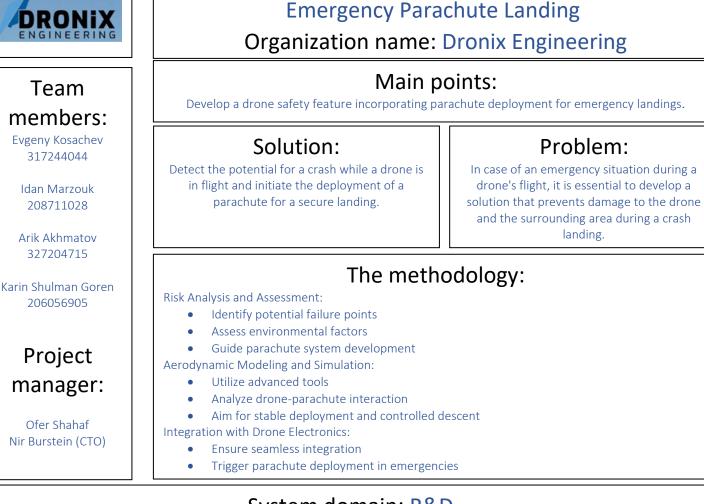
One Pager



System domain: R&D

Modules:

הפקולטה למדעים מערך פרויקטים ושיתוף פעולה עם התעשי

ArduPilot

Interfaces:

QGroundControl, Gazebo Simulator

Description of system components:

CPU: OrangeCube, Drone: 1 pro, Charger: Ev-peak, Battery, Telemetry radio: Holybro, GPS: Here 3 +, Parachute: MARS Mini v2

Defining the goals of the project:

- Deploy the parachute safely in a controlled environment.
- Comprehend and analyze the underlying code.
- Successfully deploy the parachute in-flight, ensuring the proper functioning of all system components.
- Confirm the compatibility of the parachute with the drone and ensure a safe landing.
- Ensure proper deployment of the parachute once an emergency state is detected, leading to a safe landing of the drone.

Summary and Conclusions:

- Successful coding and deployment of the servo and parachute were achieved in the laboratory experiment.
- Emergency landing conditions were defined, including verifying that the parachute is not beneficial beyond a certain altitude.
- Full tests were not conducted at the natural environment due to the unfolding security situation.
- Consider adding noise to alert the surrounding environment of the drone's emergency state.
- Manual deployment requires additional coding to stop the rotators before the parachute is deployed.