

TEAM OVERVIEW



SMART GREEN ISLAND MAKEATHON 2020




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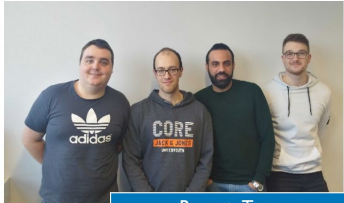
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1 Smart Farming


1.1 Plus Farming

Team Photo	Short Description
 <p>Plus Farming</p>	<p>The team Plus Farming developed a sustainable and eco-friendly method of agriculture that guarantees access to fresh, high quality vegetables inside the city centers. They created a modular and autonomous system to plant, maintain and harvest natural goods using a robotic arm. Goal was to optimize space, raise efficiency and produce with low costs.</p>

1.2 RemoteTeam


Team Photo	Short Description
 <p>RemoteTeam</p>	<p>The RemoteTeam consisted of four students from the UAS South Westphalia who attended the Makeathon remote from Germany. The team designed a flexible, modular smart farming shelf system. Starting from a single shelf for growing own fruits, the shelf can be extended to a fully automatic, room saving system and is controllable via a web interface.</p>

1.3 Lucky Vegetables and Electrons


Team Photo	Short Description
 <p>Lucky Vegetables & Electrons</p>	<p>The team Lucky Vegetables and Electrons integrated a vertical, automatically watering AutoFlip farming solution into a window frame. It can also flip inside the window frame to get the plants outside or inside. This minimizes the space needed, and the automatic system helps the user to grow their plants efficiently and without much work put into the gardening.</p>

2 Smart Climate


2.1 Wildfire Jewel

Team Photo	Short Description
 <p>Wildfire Jewel</p>	<p>The team Wildfire Jewel defined four problems of fighting large fires: forecast, detect, locate and combat. The team focused on detection and location. They used local low-cost ground stations for locating and drones for monitoring. The automated system creates an interactive map to make the firefighters' job easier and more effective.</p>


2.2 Wildfire Maps

Team Photo	Short Description
 <p>Wildfire Maps</p>	<p>The team Wildfire Maps wanted to visualize and process wildfire data. The team decided on creating a map, which shows the most dangerous areas for wildfires. They developed several possible project ideas by using MatLab and a server. This solution would be of great help in the daily work of firefighters.</p>


2.3 Firefighters

Team Photo	Short Description
 <p>Firefighters</p>	<p>The team Firefighters decided to take a different approach for the MathWorks Industry Challenge. They built a system that can map forests and provide data regarding potential risks for wildfires. By using Image processing and Machine Learning they aimed to predict the danger of fires and make the world a safer place.</p>


2.4 Drone Forest Patrol

Team Photo	Short Description
 <p>Drone Forest Patrol</p>	<p>The team Drone Forest Patrol created a cooperative drone system consisting of an autonomous glider to map and survey areas that are at risk. Furthermore, they developed a central unit analyzing the maps to detect wildfires in an early stage and several autonomous multi-copters with thermal cameras, humidity- and temperature sensors.</p>

2.5 Team SIRE


Team Photo	Short Description
 <p>Team SIRE</p>	<p>The team SIRE developed a mobile robot (first of a whole fleet), which measures temperature and humidity, and can explore the island of Gran Canarias. It shall also map the measured data to enable accurate wildfire predictions. Its integrated camera uses Deep Learning to detect wildfires, as well as spoiled waste that should be removed.</p>

2.6 Rincón AMUVA


Team Photo	Short Description
 <p>Rincón AMUVA</p>	<p>The team developed a network of sensored beacons to predict and prevent forest fires, measure temperature and humidity in the area and generate a dynamic map for the monitoring of the controlled area. This project includes the development of the hardware as well as the network communication software, the visual interface and the control software.</p>

3 Smart Robotics


3.1 SafeLeaf

Team Photo	Short Description
 <p>SafeLeaf</p>	<p>The SaveLeaf Team worked on the B&R Industry Challenge. The main idea of the project was to develop an application, which will help users to locate trashcans for plastic, food, glass, etc. The second part was an electrical tool that will alert users when the trashcans are full and where there are available empty trashcans to drop the trash.</p>


3.2 Futuric

Team Photo	Short Description
 <p>Futuric</p>	<p>The team Futuric was a quite large and international team. They developed an automatic separator for different types of bin. For example for organic and inorganic trash. The system will also automatically notify the client if the bin is full, malfunctioning or maintenance needs to be done.</p>


3.3 LPN

Team Photo	Short Description
 <p>LPN (Life in Plastic)</p>	<p>The team LPN (Life in Plastic is not Fantastic) invented an innovative waste separating system, which is able to distinguish the different types of objects very specifically. Using camera recognition, combined with several sensors the system will provide a quick and detailed sorting. The mission was to conquer waste pollution and increase the recycling rate.</p>

3.4 Team Mix


Team Photo	Short Description
 <p>Team Mix</p>	<p>The Team Mix wanted to develop a solution for an autonomous lawn mower to cut the grass without killing small animals in its path. With the help of sensors, the lawn mower shall be able to detect and avoid animals without risking their lives. The system consists of four main components: PIXL, ultrasonic module, Raspberry Pi y Adafruit Brekout.</p>

3.5 Team SIRV

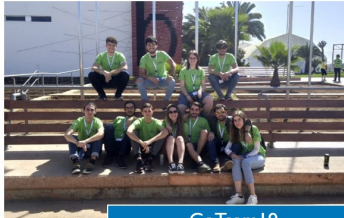
Team Photo	Short Description
 <p>Team SIRV</p>	<p>Team SIRV (Smart indoor rescue vehicle) designed a vehicle to gather information in dangerous environment. SIRV shall help firefighters finding people in burning buildings. For this purpose, SIRV is fire resistant and smart to detect fire and humans. It is equipped with a camera to stream video. An ultra-sound detector finds obstacles in polluted and smoky areas.</p>

4 Smart Mobility

4.1 Smart Parking Team


Team Photo	Short Description
 <p>Smart Parking Team</p>	<p>The Smart Parking Team worked on a solution to improve customer loyalty and overall experience of shopping for electric and non-electric car drivers. The main goal is to provide a blissful charging experience for electric car owners while they shop, as well as to encourage customers to come back to the mall.</p>

4.2 CoTeam19

Team Photo	Short Description
 <p>CoTeam19</p>	<p>The team CoTeam19 consisted of eleven boys and girls who wanted to find a solution that can monitor the traffic of persons in delicate areas. Furthermore, the team wanted to provide the local government with the tools to control the traffic streams of tourists in order to preserve the environment and natural patrimony.</p>


5 Smart Security

5.1 DeepFlow

Team Photo	Short Description
 <p>DeepFlow</p>	<p>The team DeepFlow created “God’s Eye”, a GPS based bracelet, which enables tracking down individuals in isolated areas (deep sea, dense forests, and desert), without recurring to the internet or GSM network. The visualization is displayed on a mobile app for individuals, and a website for organizations that want to track their clients during their trips.</p>

6 Smart Production

6.1 Garbage

Team Photo	Short Description
 <p>Garbage</p>	<p>The team Garbage consisted of five boys and girls who wanted to find a solution to improve the waste-life-cycle and make it more transparent for end consumers. They worked on the development of a transparent recycling process that allows the consumer to know where their plastic goes, and how much of it is recycled.</p>