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Engagement

Author: tariq.ahmad
36137 views

Attendees

Total Confirmed Attendees: 440

- gamal
- Ram9985
- Roby73
- juandering
- desmonduz
- Ashif123
- Chrisnah001
- noishixzen
- Amsrahal
- MarioPN

1 2 3 4 5 ▶▶

This event occurred in the past.

Smart Agriculture: Pest Monitoring with AI and Arduino

Watch On-Demand

When
27 Apr 2023 11:00 AM to 12:00 PM Central Time (US & Canada)

Where
On24

Event Type
Webinar (On24)

As invasive insects can cause great damage to the vines and grape harvest, monitoring pests in vineyards is a crucial element within wine production. In this webinar we will show how it's possible to remotely evaluate the pest population in vineyards, using Machine Vision and Machine Learning.



During this webinar, Andrea Richetta, head of the Pro/IoT market at Arduino will give an overview of how Machine Vision and Machine Learning can be used with smart agriculture and will prepare a live demo using the Nicla Vision board and the MKR 1310, focusing on LoRa and the available solutions from Arduino.

An Arduino Nicla Vision with trained model, combined with a MKR 1310 will identify and send data to Arduino IoT Cloud over LoRa to determine in real time the number and type of insects in a trap(s).

Agenda:

- Overview of how Machine Vision and Machine Learning can be used with Smart Agriculture
- Live Demo using the Nicla Vision board and the MKR 1310
- An Arduino Nicla Vision with trained model, combined with a MKR 1310 will identify and send data to Arduino IoT Cloud over LoRa to determine in real time the number and type of insects in a trap(s).
- Q&A

Who should attend:

- Anyone who is interested in Smart Agriculture and wants to understand how Arduino can enable fast and easy deployment. There's no need for any specific knowledge in this sector.



Webinar Recording

Smart Agriculture: Pest Monitoring with AI and Arduino



The Kit:

A live demo featuring the following kit will be presented. You can attend even if you don't have the kit but if you would like to follow along you will need:

Product Name	Manufacturer	Quantity	Buy Kit
Nicla Vision	Arduino	1	Buy Now
MKR 1310	Arduino	1	Buy Now

Resources:

- [Introduction to Smart Agriculture with Arduino eBook](#)

Attend and Learn to Earn a Certificate:

Following this presentation there will be a short quiz to test your knowledge. Complete the quiz and watch the presentation either live or On Demand to earn a certificate.

Read here on more information about how to get your certificate: [/members-area/support/w/site-faq/27798/how-do-i-earn-a-certificate-for-viewing-a-webinar-or-webcast](#)



To Earn a Certificate:

- View at least 30 minutes of the presentation
- Score a 100% on the quiz

The Presenters:

The Presenter:



Andrea Richetta, Head of Customer Success

Andrea Richetta is Head of the Pro / IoT Business Unit at Arduino. His role is to provide solutions to the companies that want to integrate and leverage the various Arduino solutions into their business. Joined Arduino in 2014, before this role, he was the product manager then responsible for manufacturing, then Product manager for the Hardware department. Before joining Arduino, he was ICT Manager in a multinational company in the events industry.

Nicla Vision Giveaway - Terms & Conditions

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Oldest **Best** Newest

Nkavinash over 2 years ago
Is it possible to deploy obstacle avoidance system to this board ?how?

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andrearichetta over 2 years ago in reply to Nkavinash
Hello, generally speaking, is possible using different technologies, from a TOF (Time of Flight) sensor or ultrasonic. here's an example [www.hackster.io/.../collision-avoidance-system-for-drones-7fede1](#)

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Yoann over 2 years ago
Are we going to have the "best" conditions for taking images (if images taking by UAS: what is the flight speed? And flight height) in relation to the size of the pest population vs. the resolution of the camera embedded in the Nicla vision board?

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andrearichetta over 2 years ago in reply to Yoann
Hello! the demo will be around a static trap, not flying :)

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santoshscsm over 2 years ago
Interesting to know detection tiny little bugs images on leaf considering flight speed and movement of leaves due to air flow from drone. If we can get replicate like sensors in optical sorter machine it will be one of the industry revolution solution. Looking forward to this session and use it in future

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andrearichetta over 2 years ago in reply to santoshscsm
Hello! the demo will be around a static trap, not flying :)

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mmast over 2 years ago
I selected the "Buy Kit" and it only shows the Arduino board and not the vision board. I selected "Buy Now" for the vision board and it a popup says "Product not found! Do you want to look for an alternative?" I'd like to buy the kit.

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tariq.ahmad over 2 years ago in reply to mmast
Hi **mmast**, thank you for catching this! The link should be fixed now.

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mechanix over 2 years ago
Is there any alternative to Arduino MKR 1310? I cannot get it in EU in a reasonable time.

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charlieo21 over 2 years ago
I'm not an expert on machine learning so maybe my questions are not good enough but here they are, how possible to differentiate from a pest and another insect like a ladybug or a beetle that doesn't represent a risk to the vineyard? How big is the data output from the Nicla Vision board? I asked this because I know that LoRa has a low data rate.

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rdlonisio over 2 years ago
Hello Andrea, I'm curious about power management for the overall system, considering a scenario where both devices are battery powered, a plausible scenario in a vineyard.

Can this situation cause a loss in the processing capacity of the system, or do we have to compromise on system performance? Thank you.

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rohitphd2021 over 2 years ago
I have watched the webinar live but not received the certificate please help regarding this. Thank you

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embeddedguy over 2 years ago
Really interesting webinar from Arduino. I attended one of the webinars in 2020 about Arduino LoRa. More than a webinar there was really detailed Q&A session with Andrea during that webinar.

BTW, I have had asked two questions during the webinar. Maybe that will be answered.

One was about running multiple ML models on a dual-core Arduino Nicla board and the other was about interfacing HD cameras to the Arduino Nicla vision

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seveniur over 2 years ago
Hello, in the current days could't we analyse de moisture in the grounds and only deploy water were it is really needed? I'm asking this because in front of me just right now i see the garden watering system wasting water were in my humble opinion its not needed. I imagine a drone passing by reading the previous installed sensors, sending then that data to the second drone who will deploy water in that zone. Maybe it already exists if so sorry about this comment.

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