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CYIENTIFIQ
INNOVATION LEAGUE
GLOBAL HACKATHON

sAIns digital

sAIns-digital

" Digitalizing the Laboratory with Machine Vision "

(Hackathon Theme: **Building Intelligent Products and Platforms**)

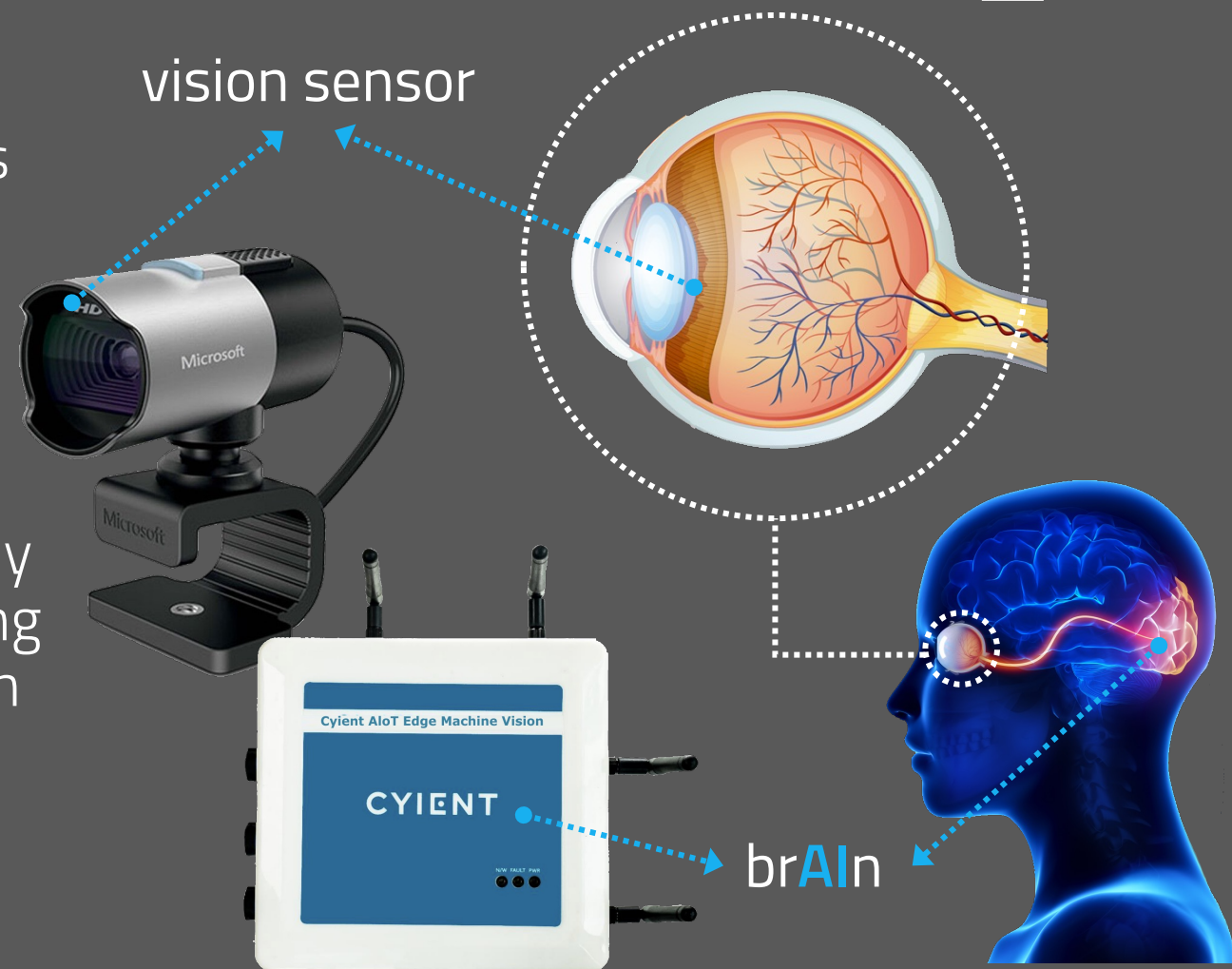Danny Ismarianto Ruhiyat (info@danito.net)

1. Lab Instruments Problem

- The existence of laboratories play a vital role in research, but many are still reliant on **manual data entry** and **outdated processes**, **hindering efficiency and collaboration**

- Conventional laboratory instruments often **lack connectivity** (they don't have output at all) , making data collection and analysis **cumbersome and time-consuming**

2. Machine Vision Solution

- The word "**science**" in Bahasa Indonesia is "**sains**" (literally there is an "**AI**" in it). **sAI**ns-digital provide **Artificial Intelligence** based solutions, using **Machine Vision** technology to imitate the human eye's function in seeing the instrument output and automatically send the output data (without having to write by hand on paper or type on a keyboard)

vision sensor

Cyient AIoT Edge Machine Vision

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br**AI**n

3. Value Proposition

- **sAIns-digital** will revolutionizes laboratory operations, improving data accuracy, and streamlining research processes

- Benefits:
  - Will reduce data entry errors
  - Accelerated research with real-time data access
  - Enhanced collaboration through shared data repositories

4. Unique and Feasible

- Implementation:
  - The **sAI**ns-digital device easily attach to lab instruments
  - Seamless integration with cloud platforms for data storage and analysis

- Differentiator:
  - **sAI**ns-digital is the first universal IoT solution for laboratories, bridging the gap between conventional and modern instrumentation
  - Cost-effective and user-friendly, **sAI**ns-digital sets a new industry standard

- Unique Aspects:
  - Universal compatibility with existing lab equipment
  - Real-time data transfer to cloud-based platforms
  - Integration with data analytics tools for instant insights

5. Impact and Sustainability

- Impact:
  - Significant reduction in paper usage and waste
  - Accelerated research leads to faster discoveries
  - Enhanced data-driven decision-making in laboratory operations

- Sustainability:
  - Reduced environmental impact through paperless data collection
  - Ongoing data analysis leads to resource-efficient processes

6. Meet the sAIns-digital Team …

- Meet **Danny Ismarianto Ruhiyat** the solo fighter in sAIns-digital team as an **Machine Vision Engineer**

  - More than 3 years experience in **AIoT** & **Machine Vision**
  - More than 7 years experience in **Internet of Things** (**IoT**)
  - Has won various **national and international hackathons**
  - Has studied **Chemistry** and **IT** majors (quite familiar with the science laboratory and its instruments)

  - https://www.linkedin.com/in/dannydanito/
  - https://www.instagram.com/danito_net/
  - https://sAIns.digital/

Danny Ismarianto Ruhiyat

Machine Vision Engineer