

# Wirusowe zapalenie Pythona



Piotr Tynecki



21 luty 2020

DZIEŃ DOBRY

DZIEŃ DOBRY  
WSZYSCY UMRZEMY

# The future if we do not act now

## GLOBAL

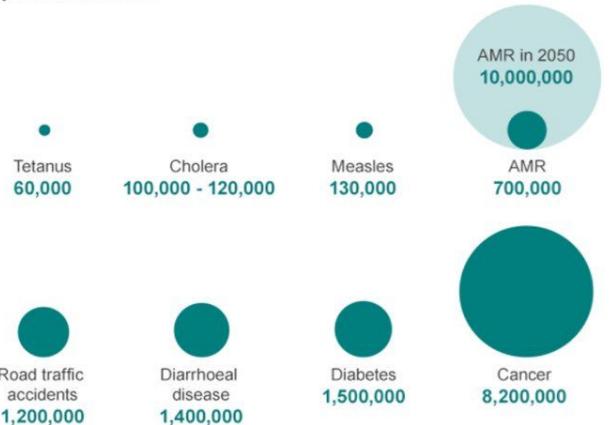
A failure to address the problem of antibiotic resistance could result in:



**10m  
deaths  
by 2050**

**Costing  
£66  
trillion**

Deaths attributable to antimicrobial resistance every year compared to other major causes of death

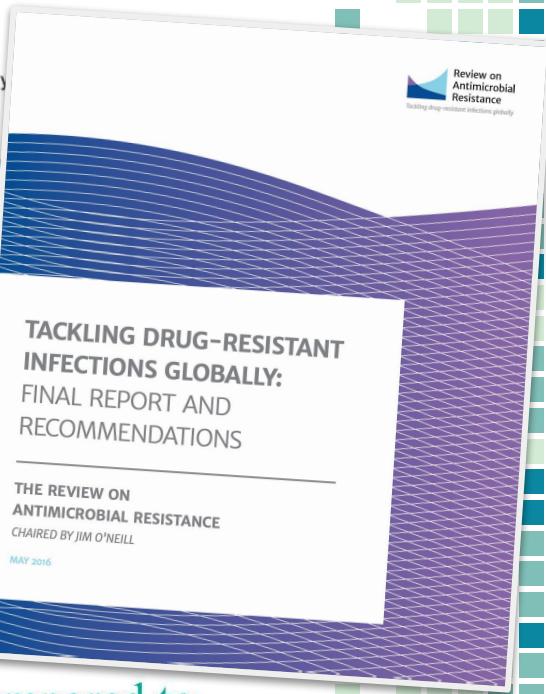


Source: Review on Antimicrobial Resistance 2014

Deaths attributable to antimicrobial resistance every year



Source: Review on Antimicrobial Resistance 2014



By 2050: more deaths from drug-resistant infections compared to e.g. cancer

<http://amr-review.org/>

 **Review on  
Antimicrobial  
Resistance**  
Tackling drug-resistant infections globally

# #10yearschallenge

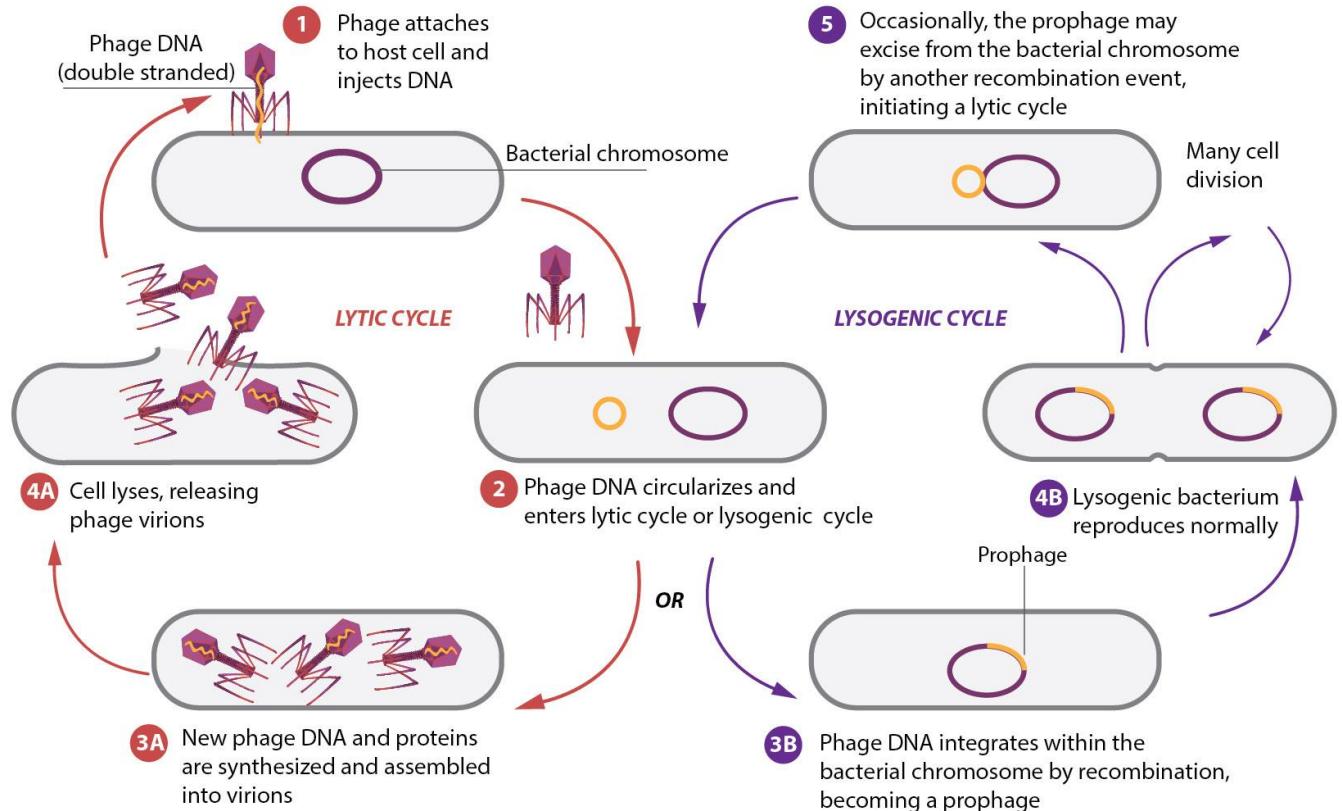
2009

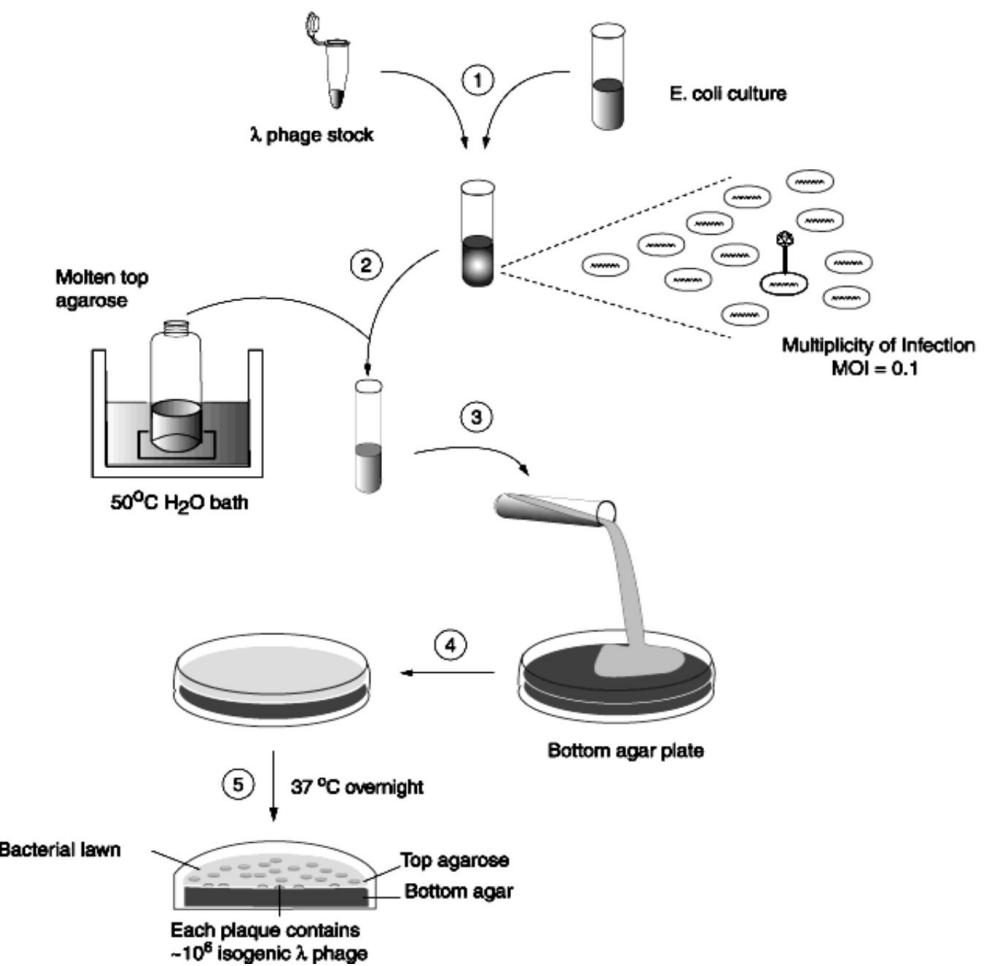


2019

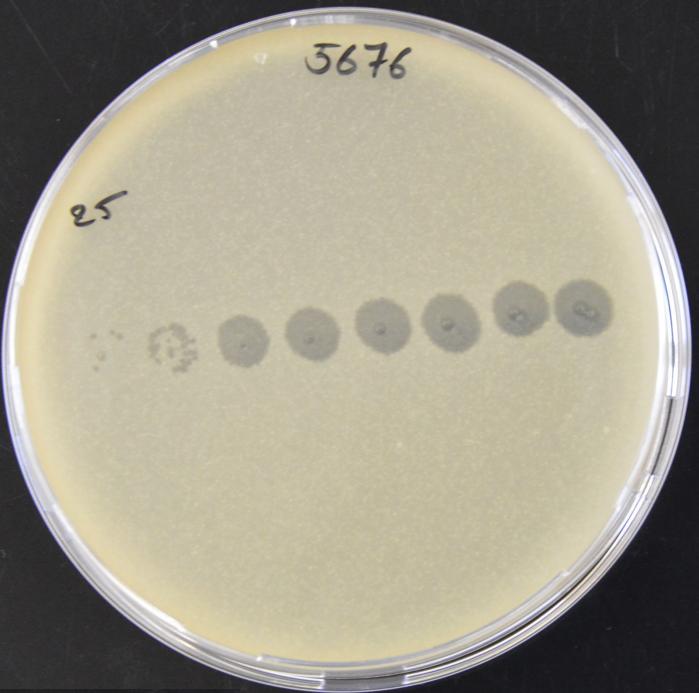


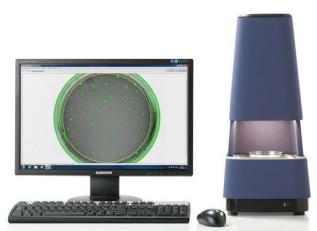
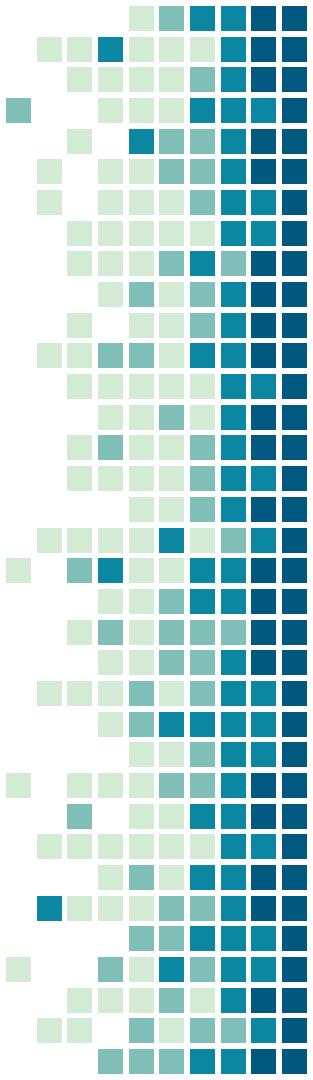






Rys. 4. Schemat przedstawiający wykonanie płytek dwuwarstwowych.





**PJOTER, ŻODYN  
NIE UMIE W FAGI**



**ŻODYN!**

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# VADER crew



Piotr  
Tynecki



Wojtek  
Głażewski



Yana  
Minina



Iwona  
Świętochowska



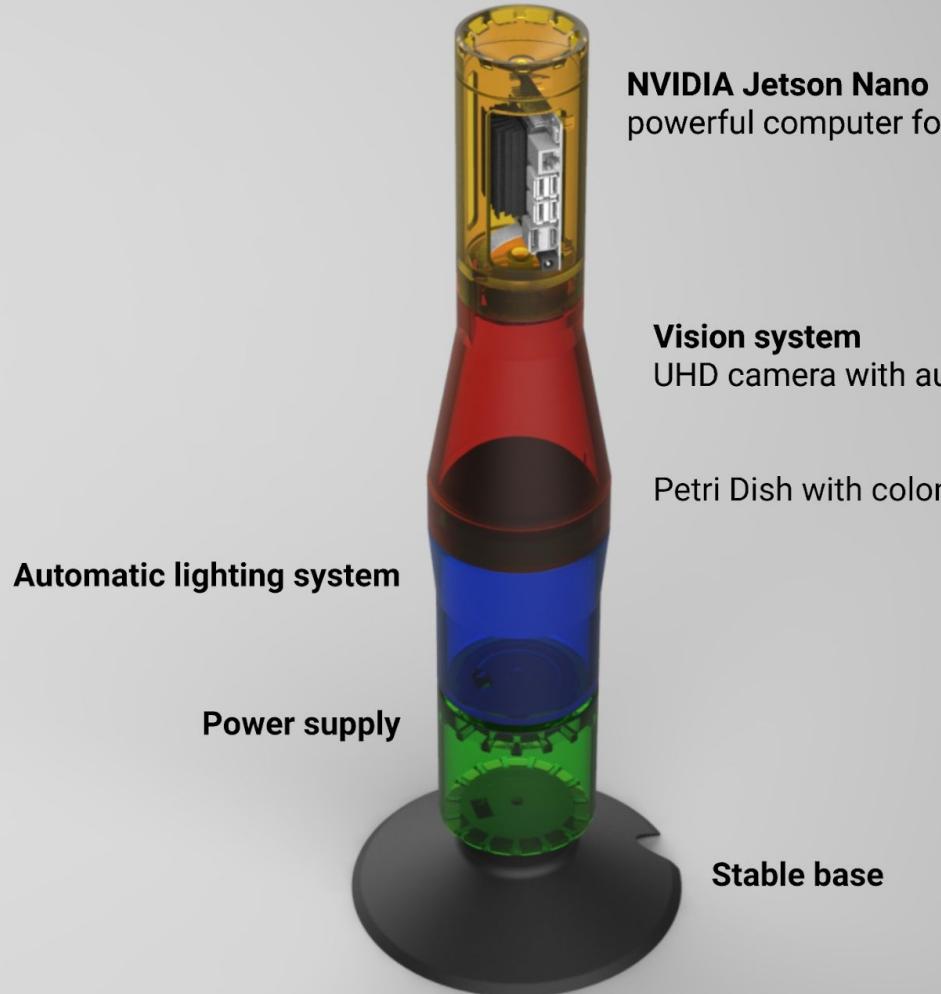
Marcin  
Płociennik



# Virus Activity Detector

for Education and Research





**NVIDIA Jetson Nano**  
powerful computer for AI

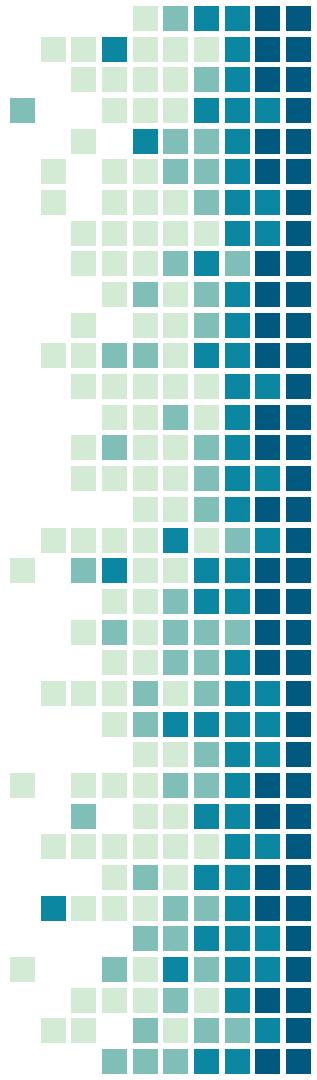
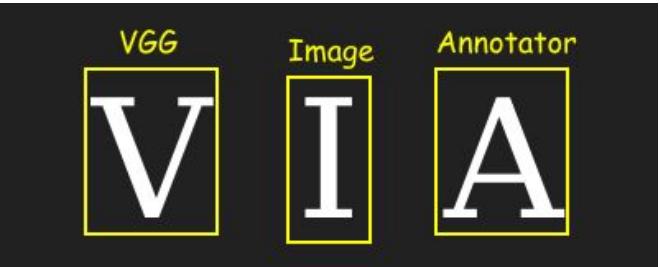
**Vision system**  
UHD camera with autofocus

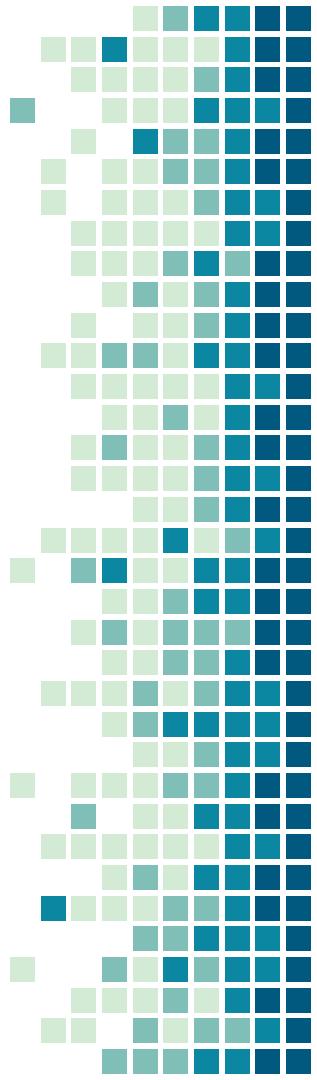
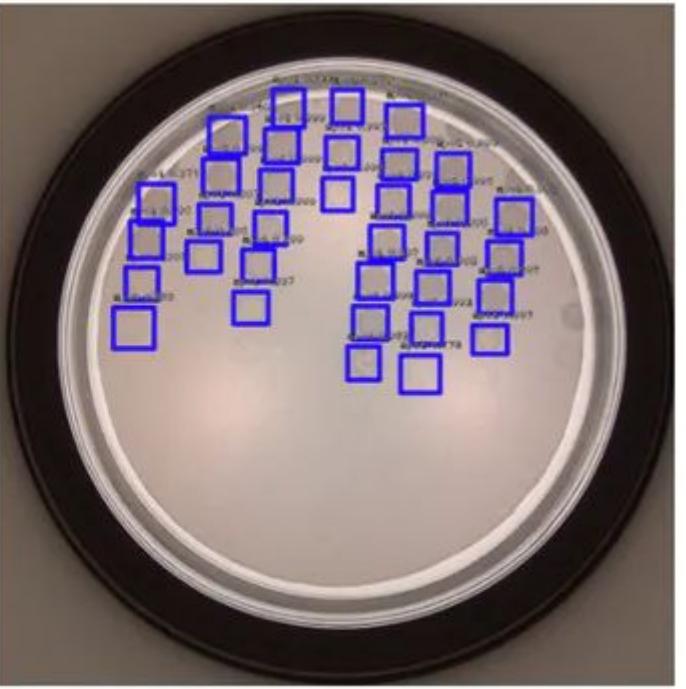
Petri Dish with colonies

**Automatic lighting system**

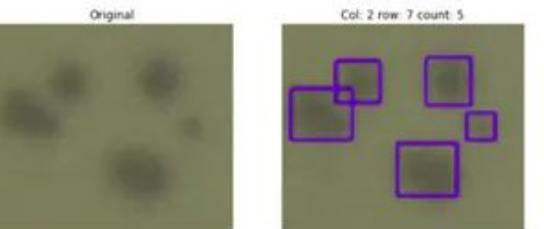
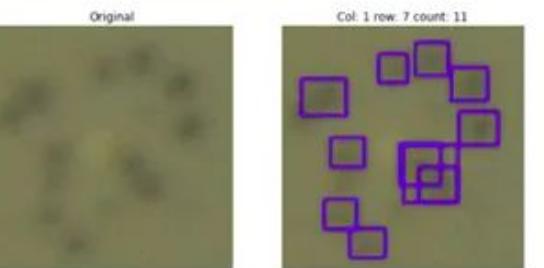
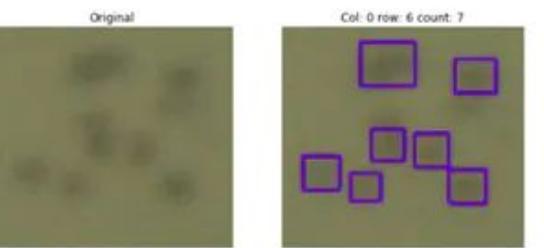
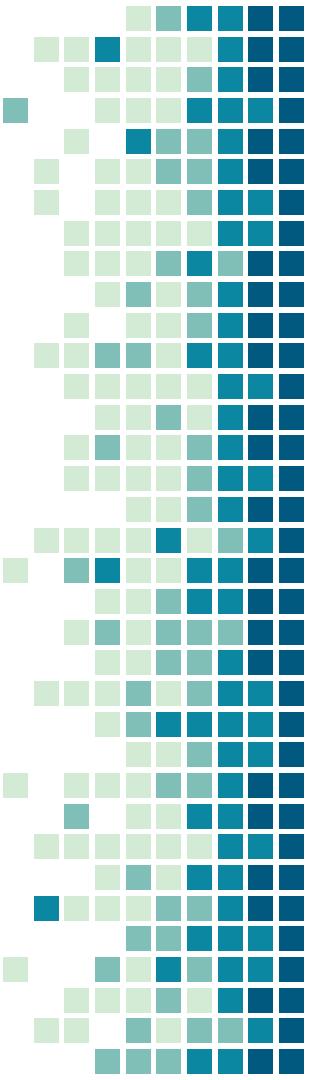
**Power supply**

**Stable base**

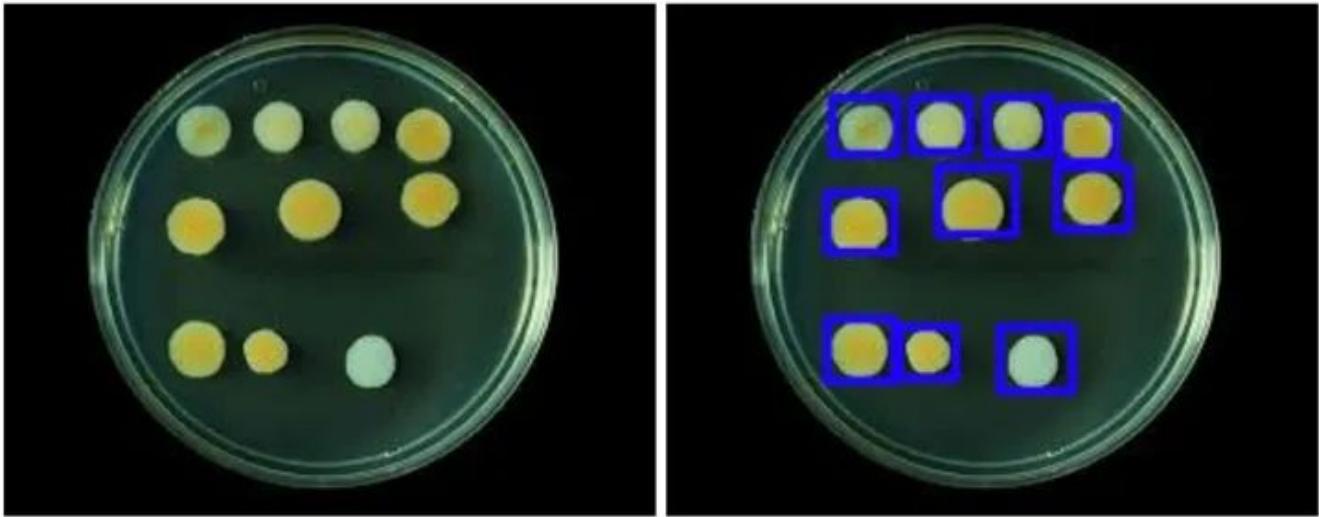




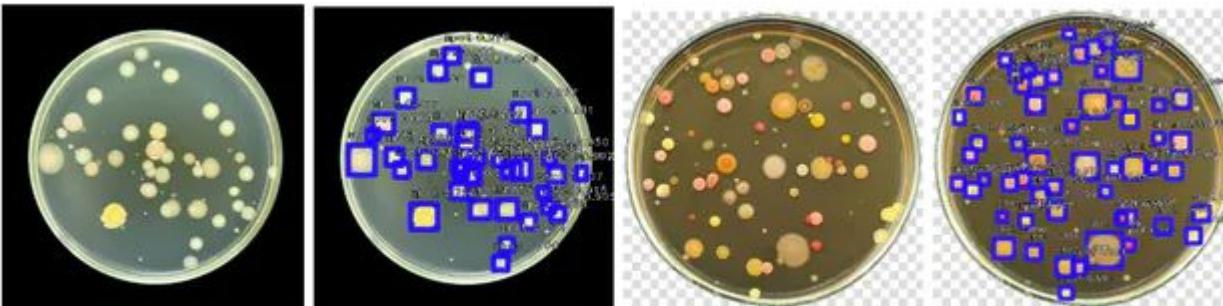
VADER classification results on two real samples with 98% mAP (mean Average Precision)



Source: VADER deeper mini-spots image segmentation and classification



Source: VADER adopted to different types of agar plates and characteristics



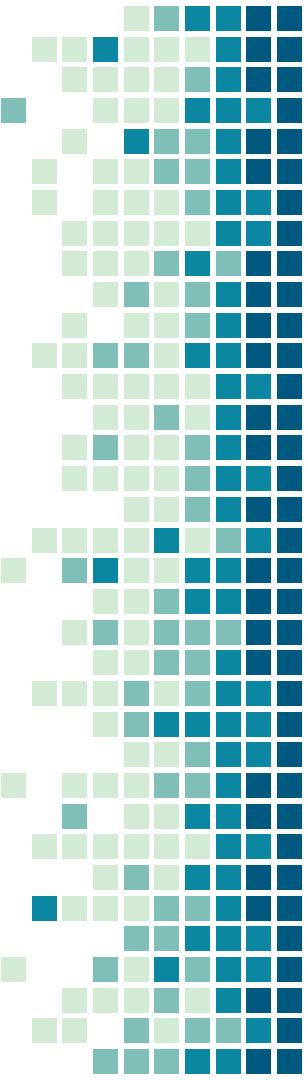
Source: VADER classification results on two unseen before samples from test set with 95% mAP (mean Average Precision)



**NVIDIA.**<sup>®</sup>

Submissions 79

Participants 2,542





## Q&A

