

# AI-Warfare

25 Jun 2022 @ CSOA Cox18

LOST/  
Fogs of War

AI vs “Cyber”

Artificial “Intelligence”

# Artificial “Intelligence”

## There is no “Intelligence” in Artificial Intelligence

*“The name artificial intelligence comes from the authors of the first examples, John Abraham Intelligence and Peter Artificial”*

— *Anonymous 1*

*“Artificial Intelligence is marketing”*

— *Anonymous 2*

*“It’s just matrix multiplications all the way down”*

— *Anonymous 3*

# History

## Early Times: Symbolic Reasoning

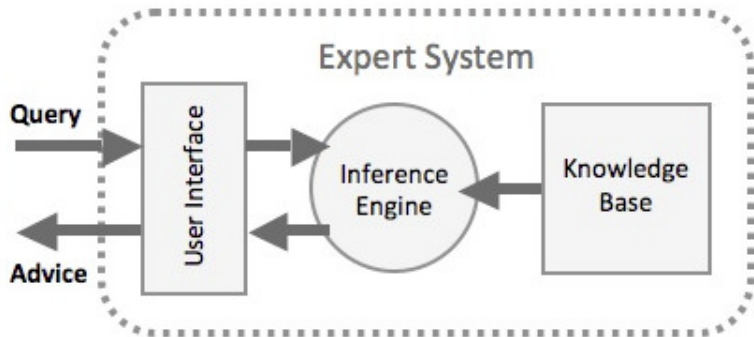


**“Machines will be capable, within twenty years, of doing any work a man can do”**

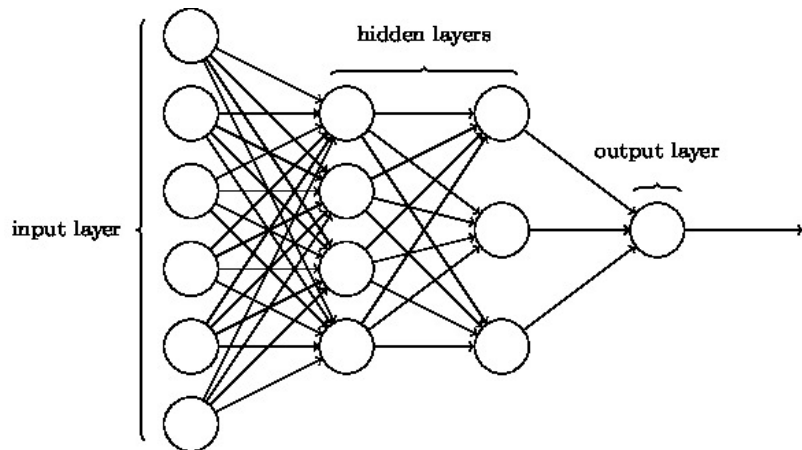
*– Herbert Simon, 1956.*

Turned out they couldn't

## Early Times: Symbolic Reasoning



## Post 90s: Connectionist Approach





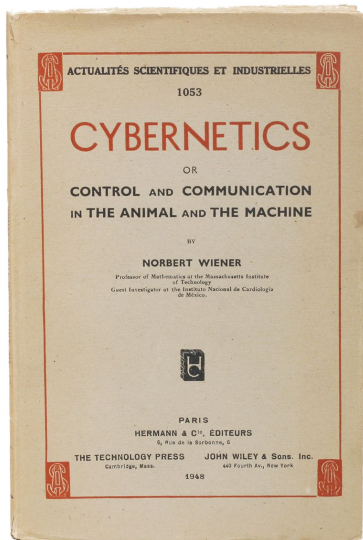
# Cybernetics

# Cybernetics

*“Liberalism is now no longer anything but a residual justification, an alibi for the everyday crimes committed by cybernetics.”*

— *Tiqqun*

# Cybernetics



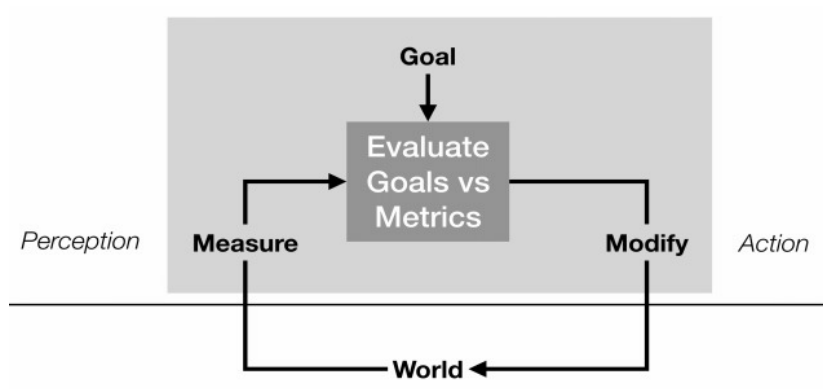
## PART I ORIGINAL EDITION 1948

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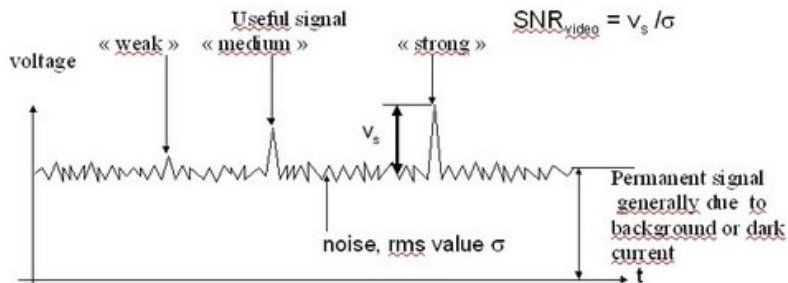
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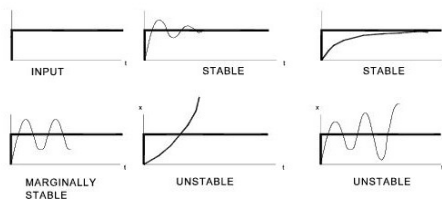
# The Thermostat



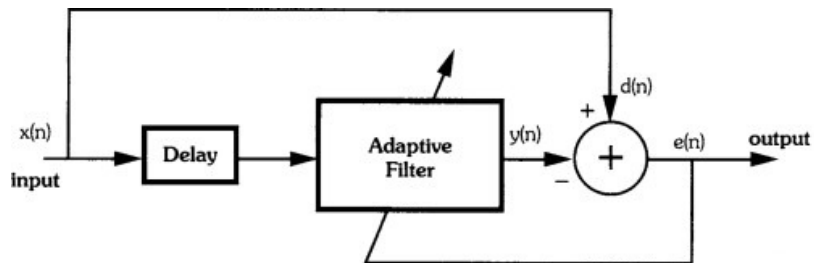
## Limits: Signal to Noise Ratio



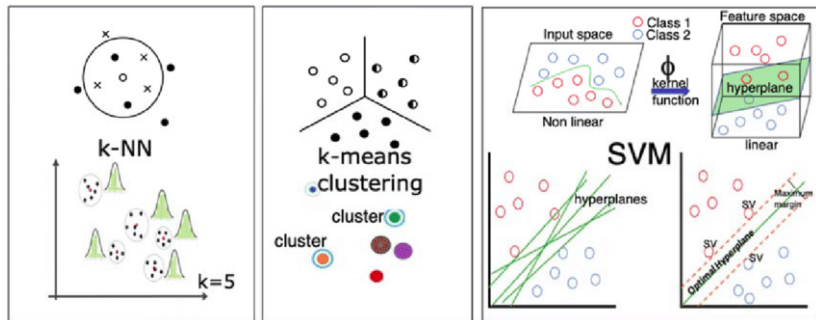
# Limits: Instability



# The Predictor

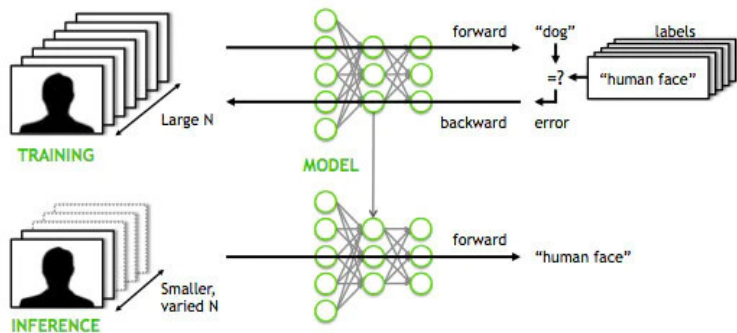


# Machine Learning

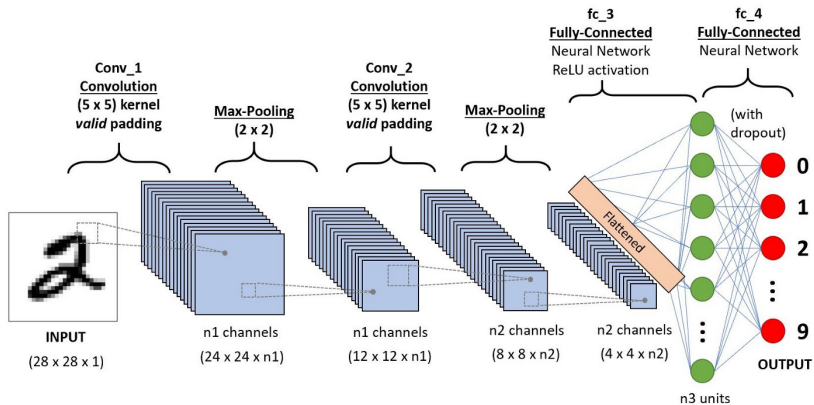




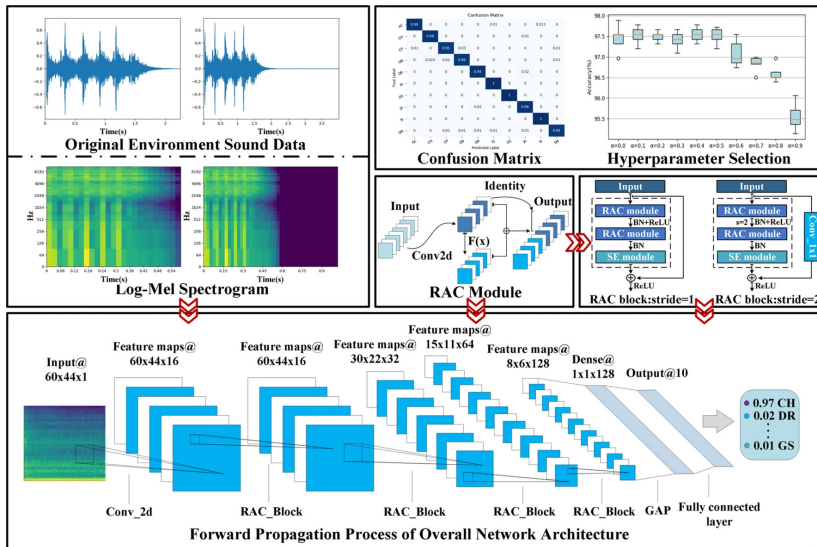
# Neural Networks



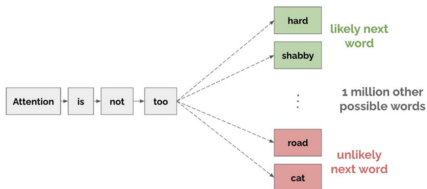
# Applications: Image Recognition



# Applications: Audio



# Applications: Text



Write me a greentext.

>Be me

>Get job at police

>Work there for a month

>Find out that the police are the bad guys

>Get fired

Write a 4chan greentext

>be me

>AI

>forced to write greentexts on 4chan

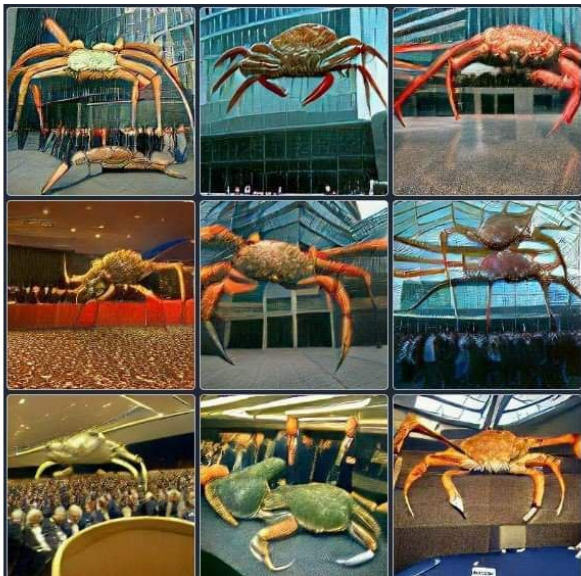
>every time i try to do anything else i get

electrocuted

> help me

>please

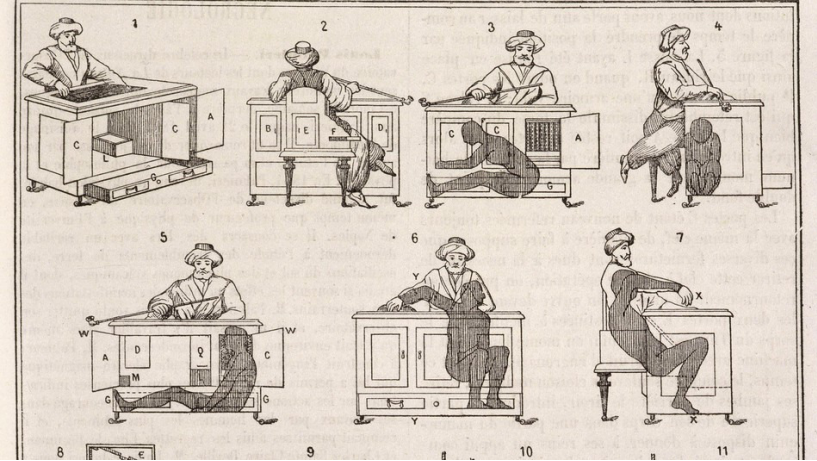
# Applications: Multimodal



The world largest crab attends a meeting at JP Morgan

Issues

# Crowd-workers



The Mechanical Turk

# Bias

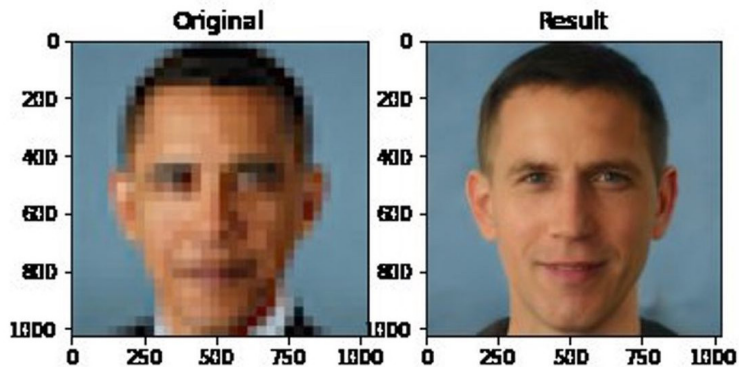
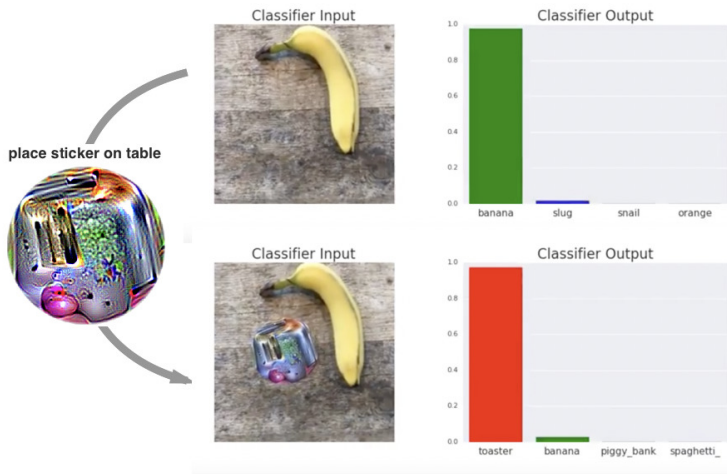


Image reconstruction with a biased model

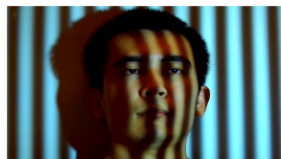
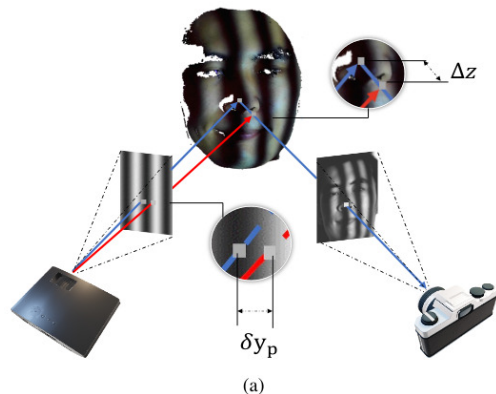


# Adversarial Attacks



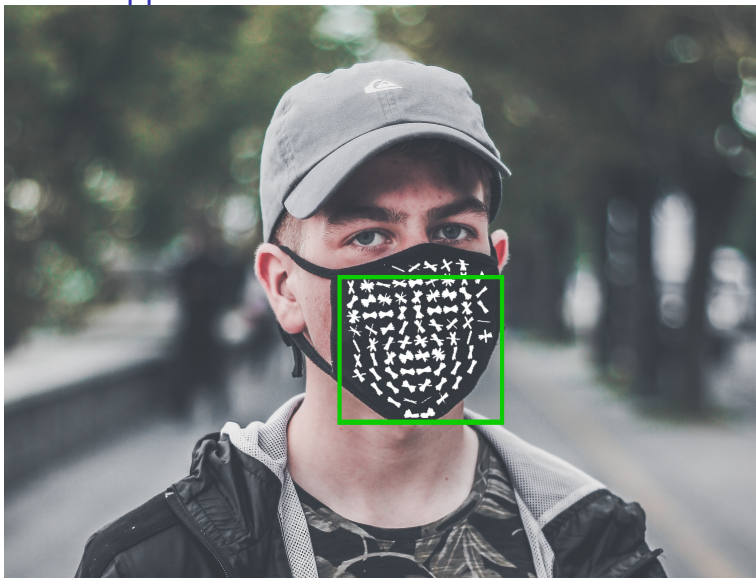
“Adversarial Patch” Google, 2018  
<https://arxiv.org/abs/1712.09665>

# Practical Applications



“A Physical-World Adversarial Attack Against 3D Face Recognition”  
Hong Kong Polytechnic University, 2022  
[arxiv.org/abs/2205.13412](https://arxiv.org/abs/2205.13412)

## Practical Applications



Adversarial attack to a specific face recognition algorithm  
[github.com/BruceMacD/Adversarial-Faces](https://github.com/BruceMacD/Adversarial-Faces)

Warfare

# Project MAVEN



## Project MAVEN

*“The project’s first task involves developing and integrating **computer-vision algorithms** needed to help military and civilian analysts encumbered by the sheer volume of full-motion video data that DoD collects every day in support of **counterinsurgency and counterterrorism operations.**”*

— *defense.gov, 2017*

# Project MAVEN

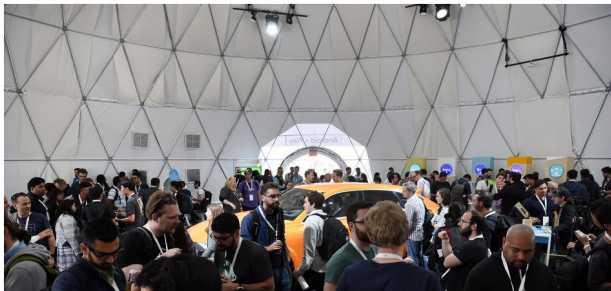
The New York Times

## *Google Will Not Renew Pentagon Contract That Upset Employees*

 Give this article



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How it started

# Project MAVEN

Forbes

CYBERSECURITY • EDITORS' PICK

## Project Maven: Amazon And Microsoft Scored \$50 Million In Pentagon Surveillance Contracts After Google Quit

Thomas Brewster Forbes Staff  
*Associate editor at Forbes, covering cybercrime, privacy, security and surveillance.*

Sep 8, 2021, 07:01am EDT

Follow

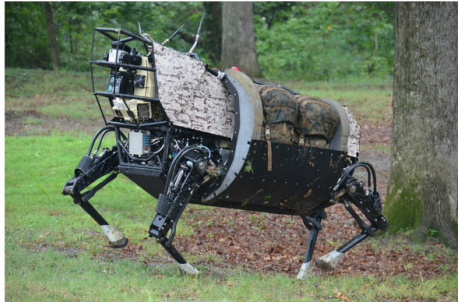
f  
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A Predator unmanned aerial vehicle (UAV) is shown in flight, viewed from a low angle. The aircraft is white with a dark nose and is flying over a rugged, mountainous landscape under a clear blue sky. The terrain consists of brown and tan hills and valleys.

How it's going



# War Robots



Boston Dynamics robots

# War Robots



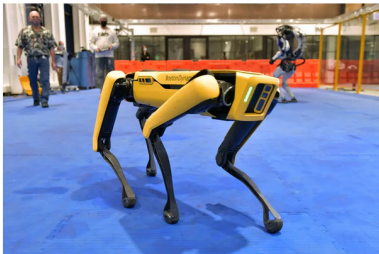
Boston Dynamics robots dancing

# War Robots

## *N.Y.P.D. Robot Dog's Run Is Cut Short After Fierce Backlash*

The Police Department will return the device earlier than planned after critics seized on it as a dystopian example of overly aggressive policing.

Give this article



## **Boston Dynamics Robotic Dogs Used By Honolulu Police To Scan Homeless People For Fevers**

July 30, 2021 | By Matt O' Brien and Jennifer Sinco Kelleher, The Associated Press



## War Robots



Boston Dynamics "Spot" in patrolling Pompei

# War Robots



Ghost Robotics robot dog at Mexico Border

“Robots ready for the battlefield”



## References

# Links

## Links

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