

Workshop:

Leveraging AI for Indian Navy

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Speaking: Srikanth Varma Chekuri

Srikanth Varma Chekuri

Unmute

Disclaimer:

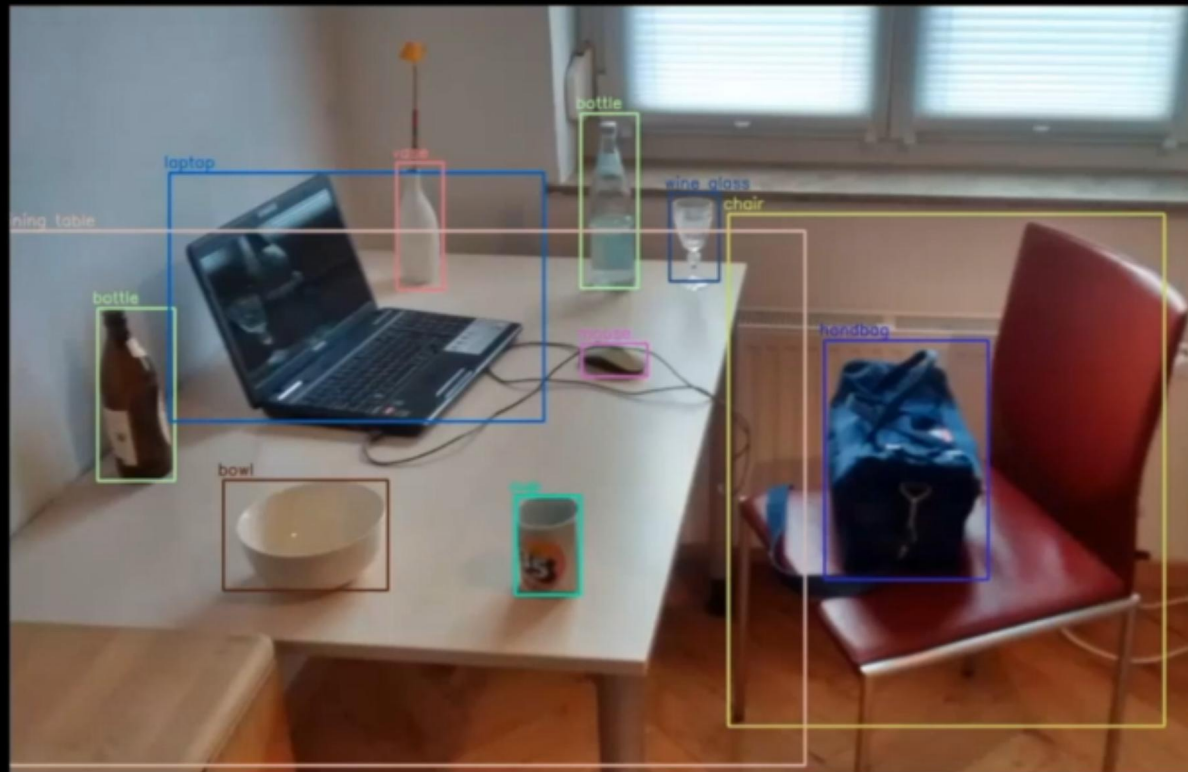
No domain - expertise
in Naval/Military applications



Speaking: Srikanth Varma Chekuri

Srikanth Varma Chekuri

Computer Vision: object detection (very fast)



source: wikipedia

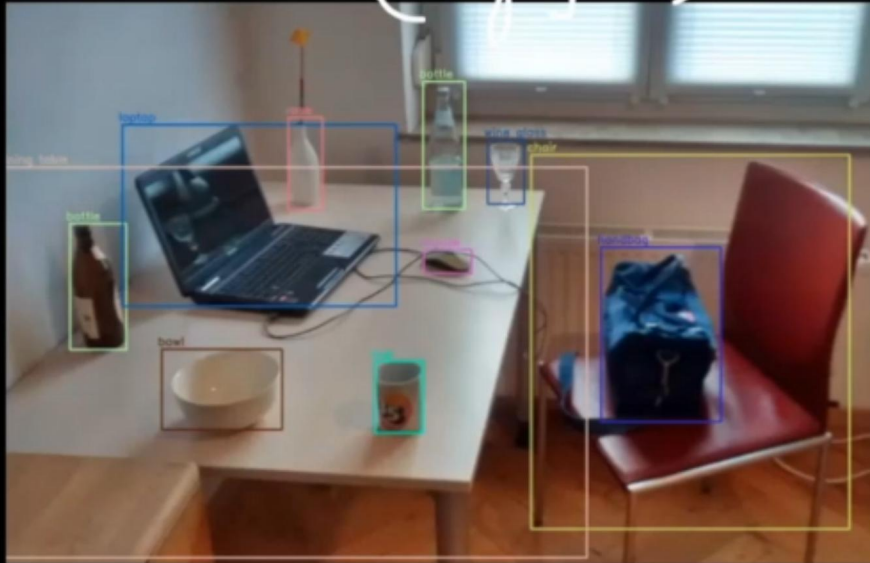
- very close to human-level

- Confidence Scores

- CNNs
Tran



Computer Vision: object detection (very fast)



source: wikipedia

Naval - Applications:

- surveillance

→ CSR



CONSUMER-grade



Computer Vision: Segmentation



source: viso.ai

Naval Applications

- safety & compliance

- ChestNet ← Chest X-ray
← CNN

- explainable AI?



Computer-Vision : Human-centric



- Fatigue

- Focus / distraction

- subtle facial expressions

↓
tasks ✓

Computer-Vision: Visual diagnosis

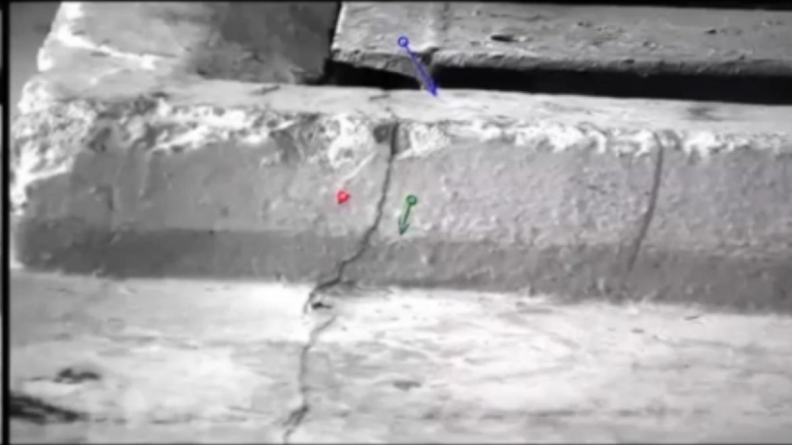
Amplification of microscopic motions
(using just a smartphone)

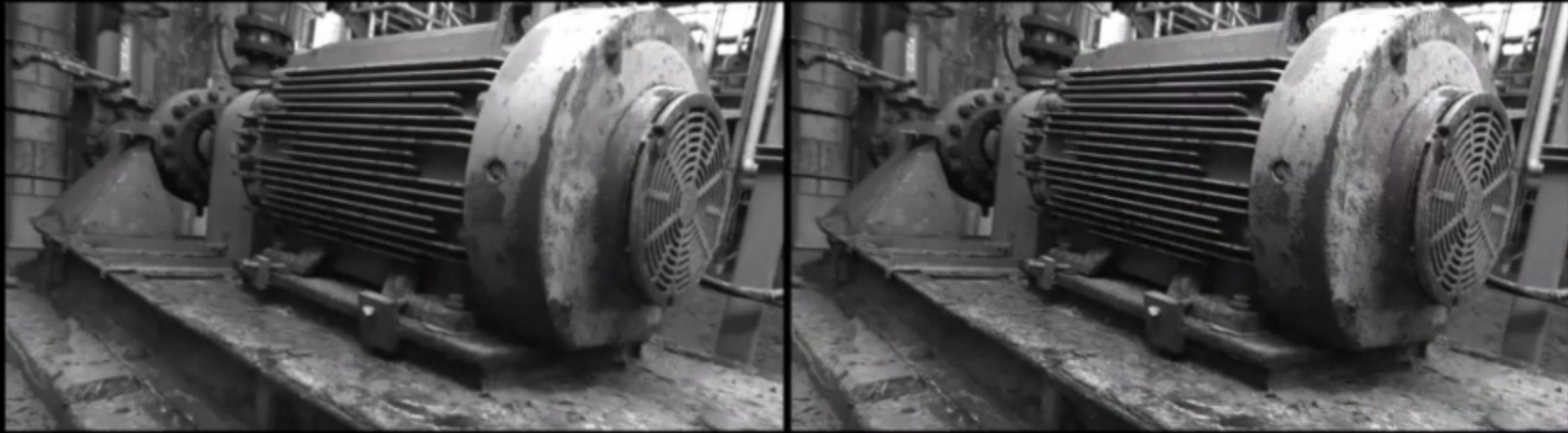
—Videos—



Premium

Search





Computer-Vision: Visual diagnosis

Amplification of microscopic motions
(using just a smartphone)

— videos —

Audio/Signal Processing

- classical vs Deep Learning based
(LSTMs, Transformers)

- Close to Human-level performance

{ - Data-hungry & compute-intensive ✓


Sonay

Speaking: Srikanth

Audio/Signal Processing

- detect specific patterns: speech; whales;

✓ { - anomaly detection: DL ← SONAR



Whale
Commercial vessel
⋮

- Naval Applications: —
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Reinforcement Learning: Deep RL

- Chess; Go & tons of games
- Super-human strategies & tactics

Go; Multi-player combat games

