



運用人工智慧
管控遠距/居家/委外的工作環境

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➤ 企業為何需要管控遠距工作環境?

- Work-from-Home / Work-from-Anywhere 已永久擴大了企業資訊安全的防衛圈
 - 每一個遠距辦公地點都是機敏資料(信用卡/社群/客戶資訊/商業機密)外洩的潛在熱點

Brian Kopp, VP, Gartner:

“從疫情開始迄今, 美國三分之一的中大型企業已開始導入某些形式的員工監控系統”

華爾街日報 9/18/2022

sweeping through U.S. companies over the past 2½ years. Since the start of the pandemic, one in three medium-to-large U.S. companies has adopted [some kind of worker surveillance system](#), and the total fraction using such systems is now two in three, says Brian Kropp, vice president of HR research at [Gartner](#). While there is a broad spectrum of how these

➤ 企業為何需要管控遠距工作環境?

REMOTE WORK IS UNSUPERVISED & UNCONTROLLED



Causing cybersecurity insider threats, productivity losses and compliance violations.



傳三星晶片廠員工用手機翻拍螢幕，3nm與5nm晶片製程機密資料外流

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讚 3,521



ACER DAY 2022
活動代言人《原子少年 | 地球》

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NITRO 5 神力覺醒 搭載Intel®技術

NITRO 5 搭載第 12 代 Intel® Core™ i7 處理器 \$44,900元起

intel CORE i7



遠距工作的趨勢與其所帶來的後遺症

Permanent

50%

Work from Home

Gartner®

Sensitive Data Misuse

\$11k per instance

Productivity Losses

10-15% is normal

Compliance Violations

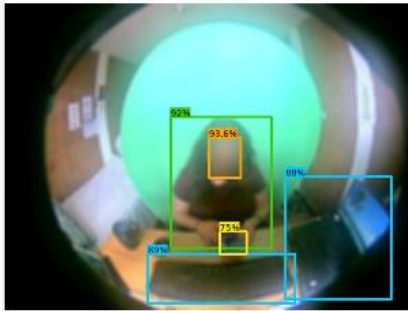
Jeopardizes business
continuity

正在使用 Realtek(R) Audio



工作環境的身分與物件識別

- ✓ Identity Verification - Orange
- ✓ One Person - Green
- ✓ Two+ Persons - Red
- ✓ Cell Phone - Yellow
- ✓ Keyboard/Laptop – Light Blue
- ✓ Paper/Book – Purple
- ✓ Images blurred post AI-scans



Maria Barbosa (T-0001) - maria@trendzact.com

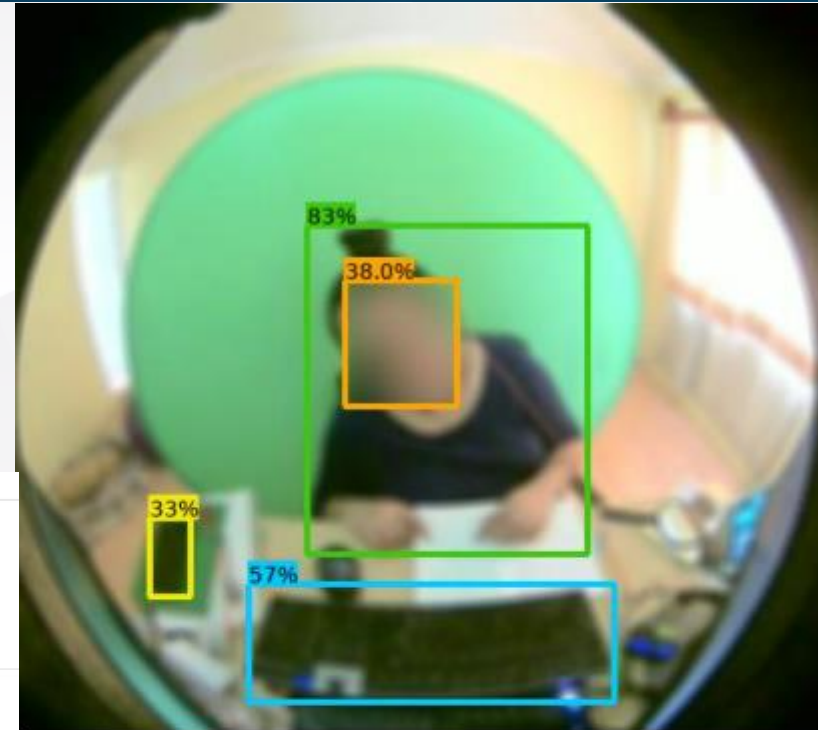
Date - 04-12-2022 15:26
Flagged - Yes
Image Quality OK- Yes
Face Detected OK - Yes

Detections

Identity - 93%
Person - 92%
Keyboard - 89%
Keyboard - 88%
Cell Phone - 75%
CellPhone Zone X - No
CellPhone Zone 1 - No
CellPhone Zone 2 - No
CellPhone Zone 3 - Yes

Reference

Captured by WinApp - 04-12-2022 15:26 
Transferred to S3 - 04-12-2022 15:26 (UTC)
Scanned by WSAD - /04-12-2022-20-27/success.trendzact.net (UTC)



Flagged - Yes
Image Quality OK- Yes
Face Detected OK - Yes

Detections

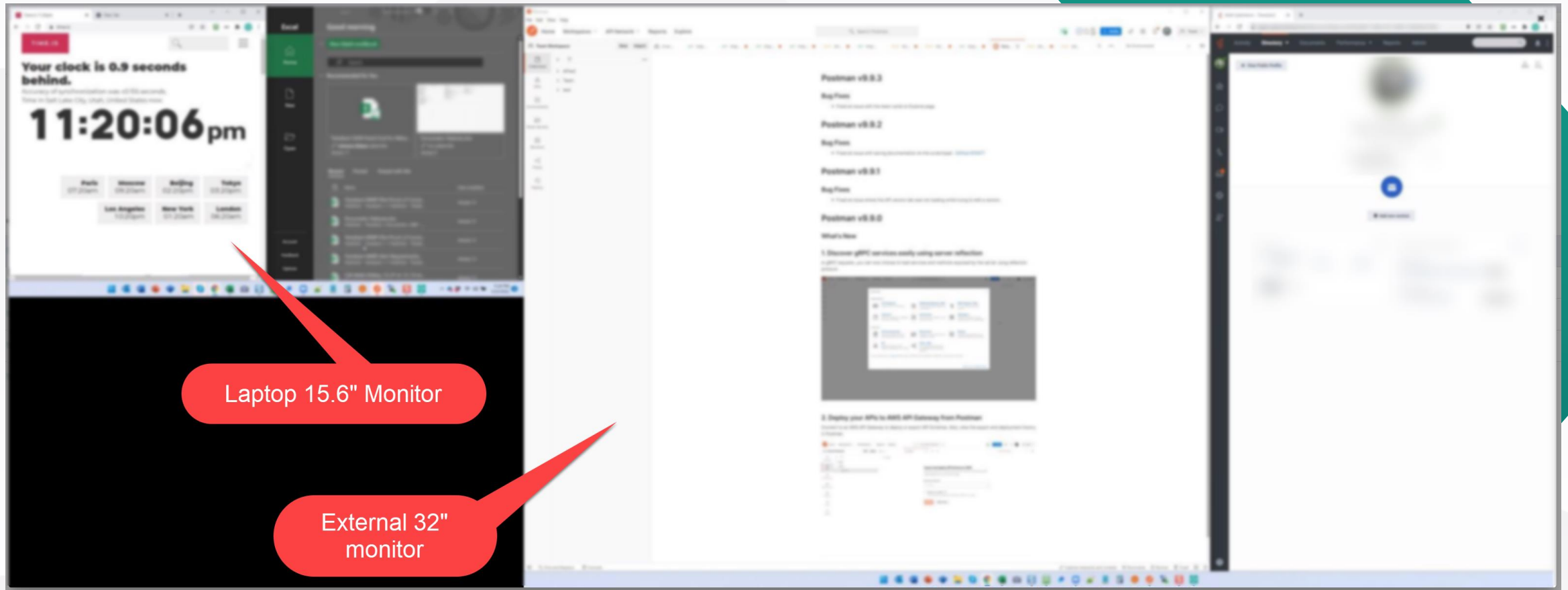
Identity - 38%
Person - 83%
Keyboard - 57%
Cell Phone - 33%
CellPhone Zone X - Yes
CellPhone Zone 1 - No
CellPhone Zone 2 - No
CellPhone Zone 3 - No

廣視角鏡頭WEBCAM



- 高感度鏡頭, 環境明暗皆宜
- 100 KB / 影像檔
- 網路傳輸頻寬要求低
- 低CPU使用率
- 單鏡頭180度視野
- 雙鏡頭度視野

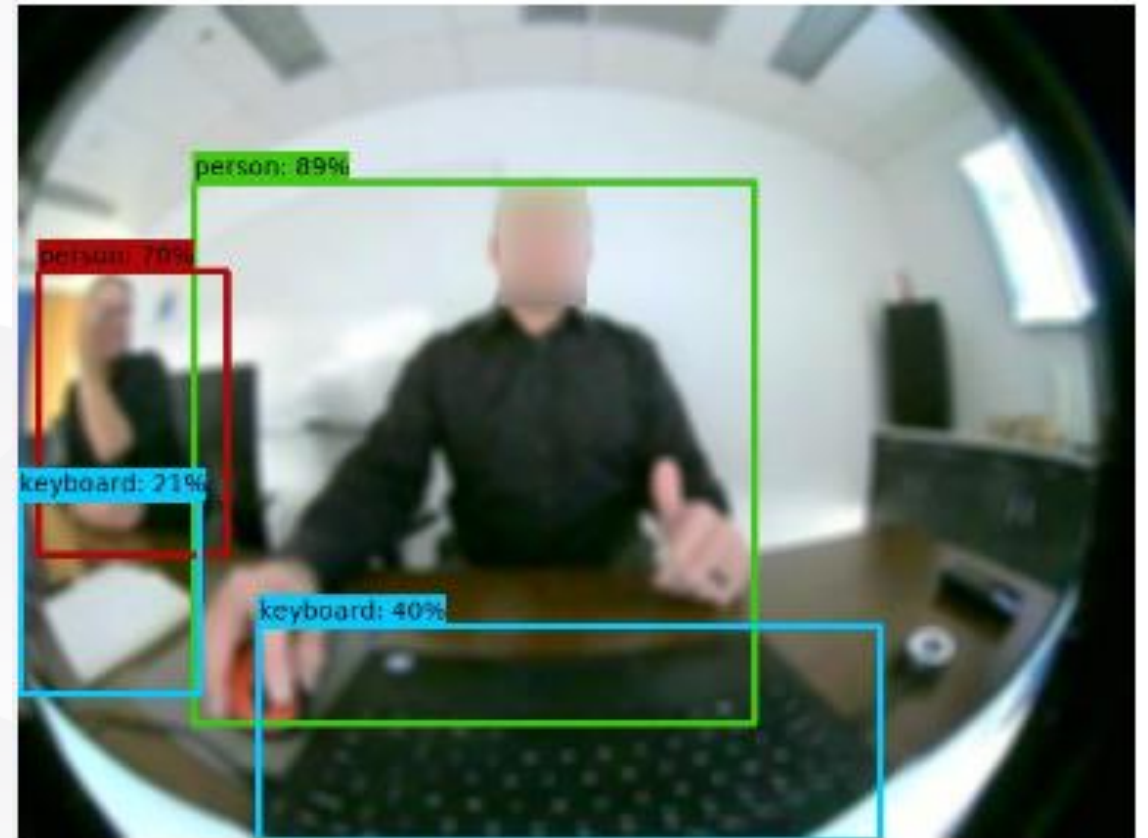
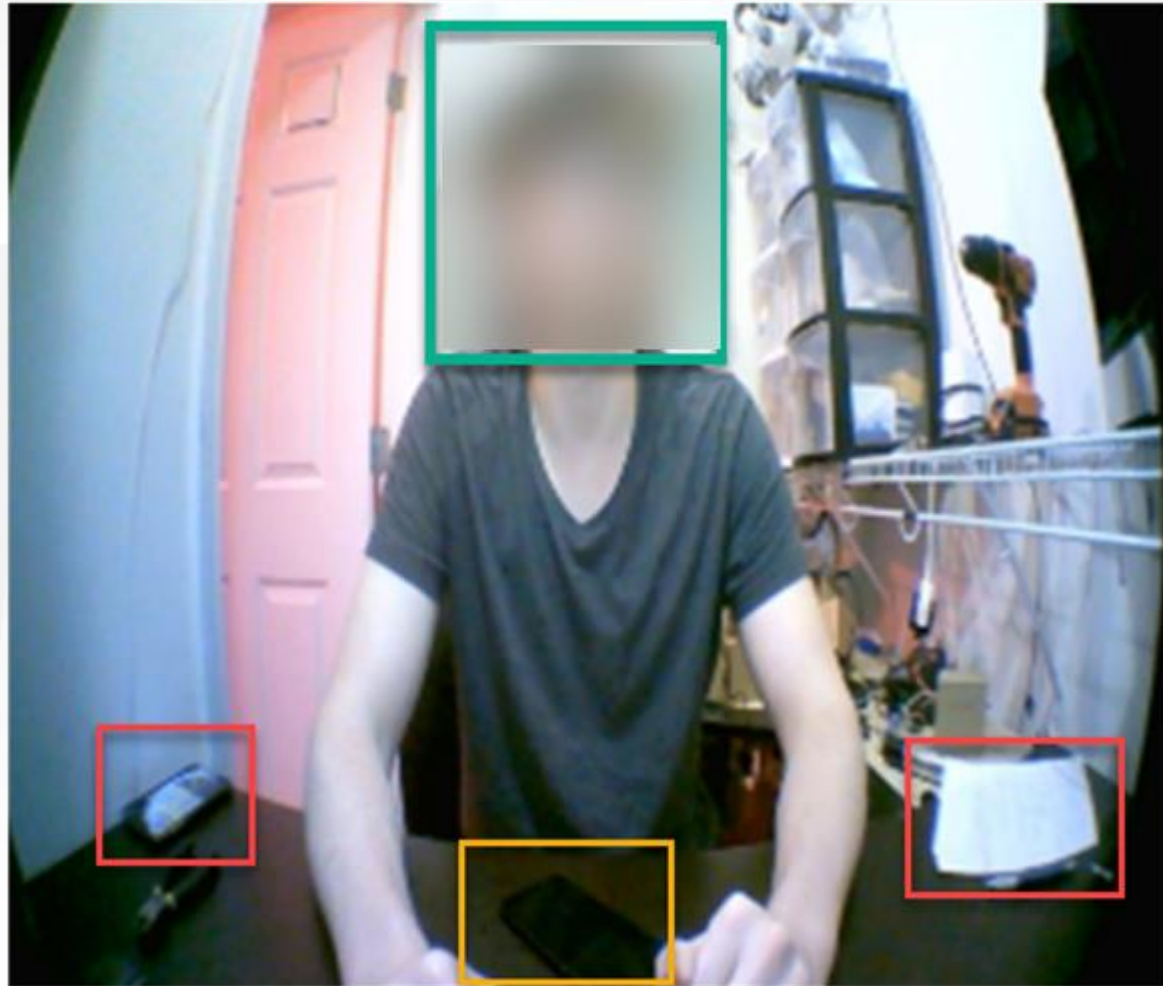
全自動電腦螢幕截屏



Laptop 15.6" Monitor

External 32" monitor

全盤的工作環境掌控

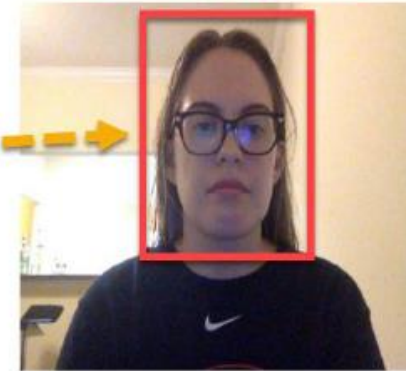
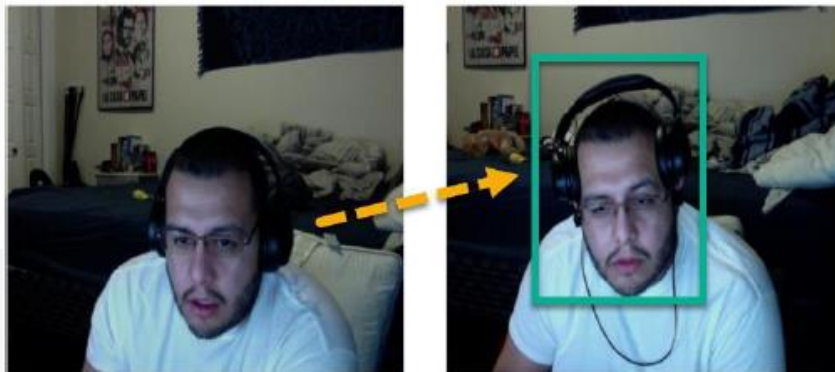


WHO-使用者身分識別

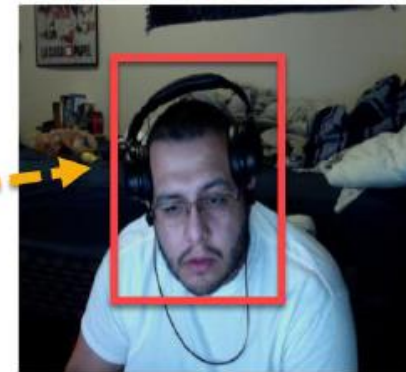
LIVE IDENTITY VERIFICATION



TRUE - Variance = 0.259



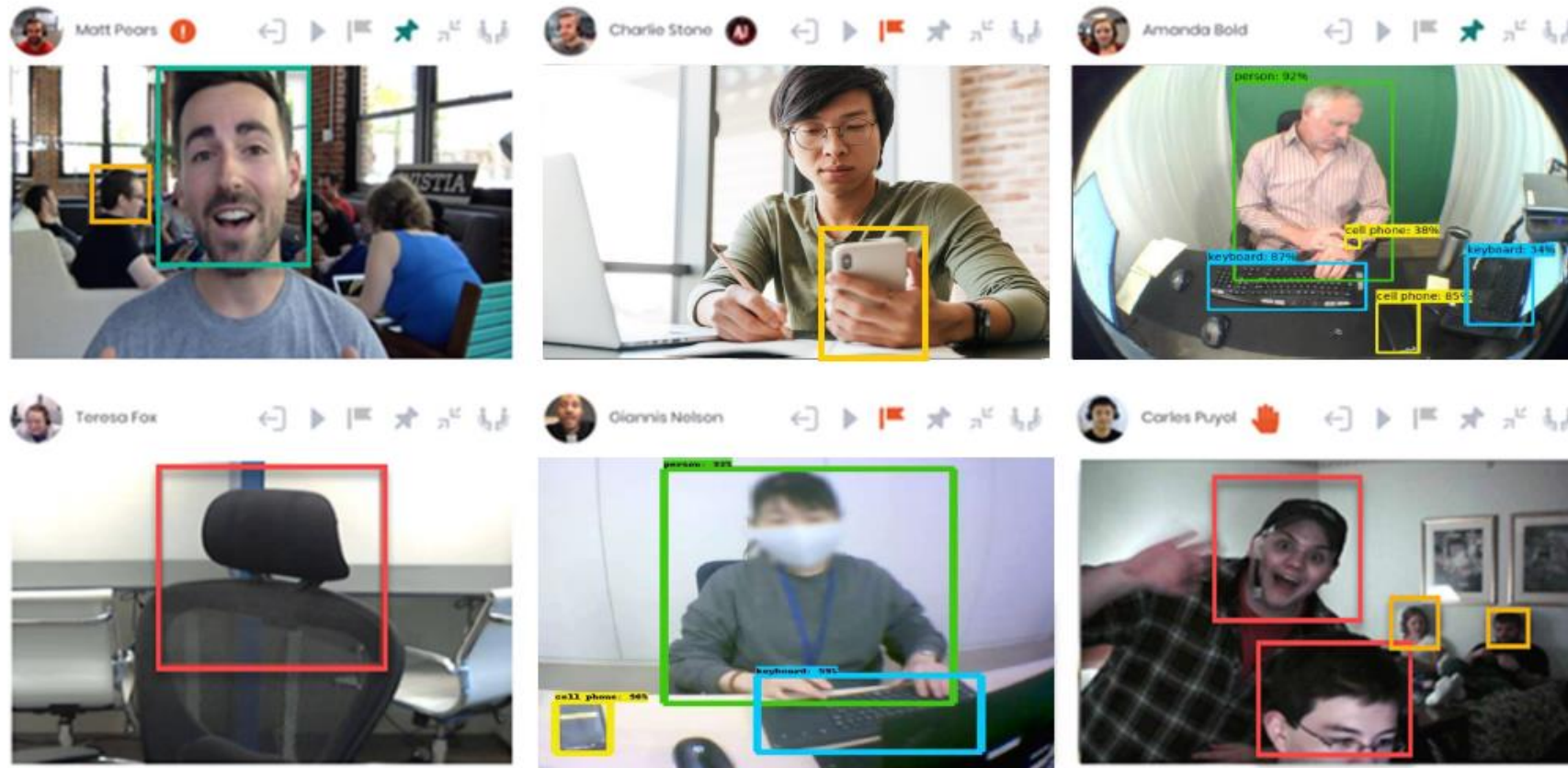
FALSE Variance = 1.698



FALSE Variance = 1.822

WHAT-工作環境物件/行為識別

REAL-TIME MONITORING

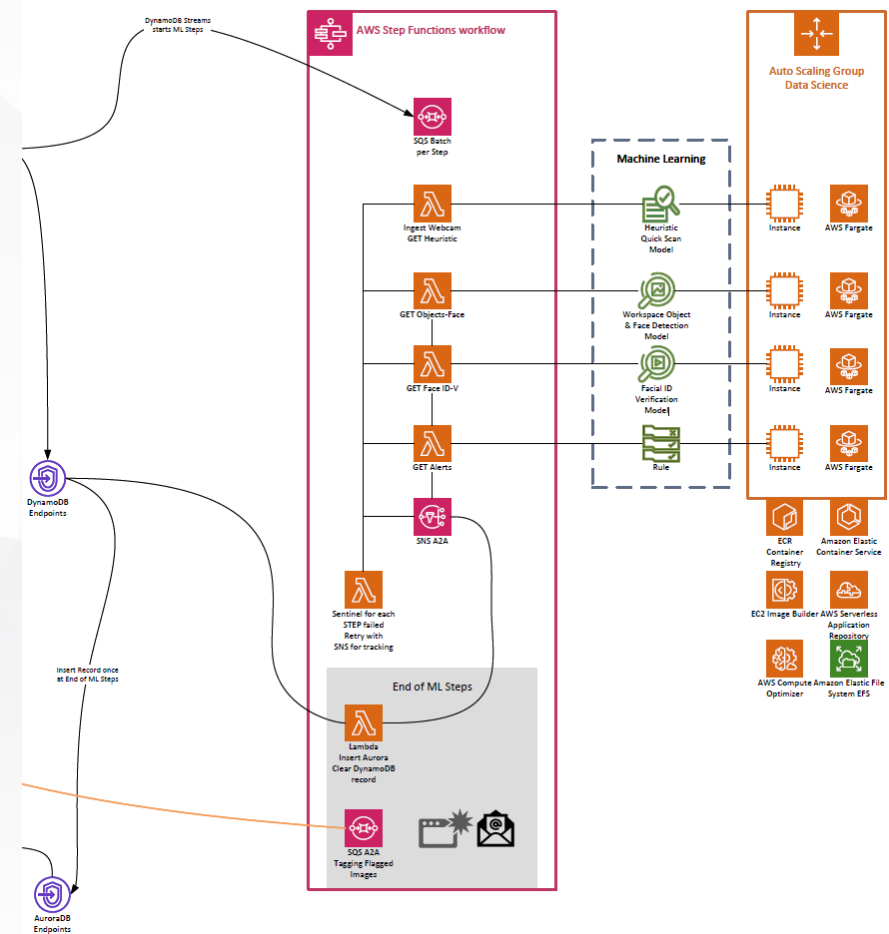


➤ 企業需要掌控那些工作環境的影像？

- Endpoint Agent 啟動 Image Capture
 - Webcam Image: 利用 AI/ML 技術分析以達成
 - 顏面識別: 使用者身份辨識
 - 物件識別: 手機, 相機, 鍵盤, 螢幕, 紙張
 - 行為識別: 對螢幕拍照
 - Screen Capture: 存證 (對螢幕拍照行為之參考證據)
- Agent 將蒐集之影像 (Webcam/Screen Capture) 傳至中心比對分析

➤ 中心對Agent上傳影像之處理

- Webcam Image:
 - 先將Image轉成Vector (Digital Matrix)
 - Image Differential分析
 - 對Vector執行AI/ML (GPU Hueristic, GPU ASAD, GPU IDV, Rules Engine,...)
 - Facial Recognition, Object Detection, Behavior Detection, Sentiment Analysis
- Screen Capture: 存檔



企業遠距工作環境管控需求

功能類別	功能需求	重要性			
權限與存	能與AD或Azure AD整合	Must			
RuleName	RuleId	DetectionRules_IsActive	Confidence	CounterConsecutive	CounterSuspend
Cell Detected in Workspace	10	TRUE	0.55	2	5
Cell Detected near Face/Active	11	TRUE	0.55	2	5
Computer Left Unattended	14	TRUE	0	3	30
Identity Periodic Failed	17	TRUE	0.4	3	6
Image Quality Failed	18	TRUE	0	5	24
Keyboard/Laptop 2+ Detected	19	TRUE	0.35	5	10
Paper/Book Detected	22	TRUE	0.35	5	10
Persons 2+ Detected	23	TRUE	0.6	3	6
Webcam Alignment Failed	25	TRUE	0.35	5	24
Cell detected taking pictures	34	TRUE	0.55	3	12
日誌與存證	螢幕截屏功能	Optional			
	違規行為拍照存證的功能	Must			
	Log匯入SIEM	Must			

➤ 遠距工作環境管控對企業的貢獻

1. 減少10-15%因遠距工作而損失的生產力
2. 嚇阻機敏資料的外洩行為
3. 滿足Clean Desk等合規性要求



工作環境管控-適用場景

居家辦公

滿足
Clean Desk
等合規性要求

維持生產效率

管控資料
外洩風險

辦公室

安全
工作環境

作業流程
改進

管控資料
外洩風險

工作環境管控-AWS雲端虛擬主管

全球涵蓋率

SOC 2安全環境

國際合規性

啟用/部署簡易

雲端平台, 部署簡易, 人工智慧自動監控,
無侵犯隱私疑慮

Q&A