Evaluation of object recognition software in policing

Evaluation of object recognition software used in policing, focusing on productivity outcomes and sharing learning to support wider adoption.

Key details

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Police region	West Midlands
Collaboration and partnership	• Crest Advisory
Level of research	Professional/work based
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Research context

The Centre for Police Productivity is a national hub for supporting forces to implement new approaches and technologies to improve productivity. The centre supports forces to use data, innovation and technology to accelerate and automate policing activity. This frees up police officer and staff hours for policing activity that keeps our neighbourhoods safe. The Centre is helping forces build AI capability, while identifying applications that could deliver real operational benefits.

The usual investigative process for CCTV/video viewing and analysis is a manual labour-intensive task for officers. Object recognition tools have been introduced to provide time savings and

efficiencies in analysing CCTV/video footage and identifying persons of interest.

This evaluation has the following aims relating to object recognition tools:

- determine the financial and operational costs of implementation
- understand the potential benefits, specifically considering direct efficiencies and impact on operational outcomes
- understand the key implementation issues and lessons for future delivery
- develop standardised measures and guidance for future evaluation of object recognition tools

Research methodology

The evaluation will assess the use of object recognition in three forces, looking at three delivery models. The different evaluation approaches are outlined below.

Theory of change

Developing a theory of change to:

- agree and define immediate and longer-term outcomes, impact measures and benefits
- agree and define standardised measures for assessing potential benefits
- inform decisions for the selection of specific and appropriate evaluation methods

Process evaluation

A process evaluation to:

- understand implementation conditions in each force
- understand the context for implementation in force and across policing
- provide lessons and guidance for future implementation decisions

Case studies

Case studies of object recognition software use in investigations to:

- identify, define and evidence (qualitatively or quantitatively where possible) potential operational outcomes and impacts

- understand how object recognition tools are deployed to support investigations
- synthesise outcomes and impact across models and investigation types

Cost-benefit analysis

A cost-benefit analysis to:

- consistently determine financial and operational costs associated with each model, including ingestion time
- consistently quantify any positive outcomes for each model
- make an assessment of the cost-effectiveness of object recognition software for each model and overall