**General**

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| --- | --- | --- | --- | --- |
| ID[[1]](#endnote-1) |  | | | |
| Use case name | Behavioural and sentiment analytics | | | |
| Context | Security | | | |
| Application domain | On-premise systems | | | |
| Status | PoC | | | |
| Contributor | Name | Affiliation | Contact | |
|  |  |  | |
| Scope[[2]](#endnote-2) | Derive emotional state and goal of person from their gestures, face, actions | | | |
| Objective(s) | Determine if the movements, actions and general behaviour of a person is sign of malevolent intentions. Detect stealing of objects and other criminal behaviours. Prevent undesired beheviour (suicide), adapt narrative to state of person, provide dynamic content according to emotional responses. | | | |
| Narrative | Short description (not more than 150 words) |  | | |
| Complete description |  | | |
| Key performance indicators (KPIs) | ID | Name | Description | Reference to mentioned use case objectives |
| 1 |  |  |  |
| 2 |  |  |  |
|  |  |  |  |
| AI features | Task(s) | Recognition | | |
| Method(s)[[3]](#endnote-3) | Decision trees, deep learning | | |
| Hardware[[4]](#endnote-4) | Video camera, microphone, network, cpu, gpu | | |
| Terms and concepts used[[5]](#endnote-5) | Behavioural analytics, action, visual cues, sentiment, emotion, goal , social media, security, surveillance | | |
| Challenges and issues | Challenges: Surveillance cameras often have low resolution, can be in poorly lit environment with bad top-down view angle. A lot of suspicious behaviour can be hidden by passer-by or large crowds. Issues: Unwanted behaviours is MUCH LESS frequent than normal behaviour and can take on various forms | | | |
| Societal  concerns | Right to privacy | | | |

**Data (optional)**

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| --- | --- |
| Data characteristics | |
| Description |  |
| Source[[6]](#endnote-6) |  |
| Type[[7]](#endnote-7) |  |
| Volume (size) |  |
| Velocity (e.g. real time)[[8]](#endnote-8) |  |
| Variety (multiple datasets)[[9]](#endnote-9) |  |
| Variability  (rate of change)[[10]](#endnote-10) |  |
| Quality[[11]](#endnote-11) |  |

**Process scenario (optional)**

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| Scenario conditions | | | | | |
| No. | Scenario name | Scenario description | Triggering event | Pre-condition[[12]](#endnote-12) | Post-condition[[13]](#endnote-13) |
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**Training (optional)**

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| --- | --- | --- | --- | --- | --- |
| Scenario name | Training | | | | |
| Step No. | Event[[14]](#endnote-14) | Name of process/Activity[[15]](#endnote-15) | Primary actor | Description of process/activity | Requirement |
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| Specification of training data[[16]](#endnote-16) | |  | | | |

**Evaluation (optional)**

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| --- | --- | --- | --- | --- | --- |
| Scenario name | Evaluation | | | | |
| Step No. | Event[[17]](#endnote-17) | Name of process/Activity[[18]](#endnote-18) | Primary actor | Description of process/activity | Requirement |
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| Input of evaluation[[19]](#endnote-19) | |  | | | |
| Output of evaluation[[20]](#endnote-20) | |  | | | |

**Execution (optional)**

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| Scenario name | Execution | | | | |
| Step No. | Event[[21]](#endnote-21) | Name of process/Activity[[22]](#endnote-22) | Primary actor | Description of process/activity | Requirement |
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| Input of Execution[[23]](#endnote-23) | |  | | | |
| Output of Execution[[24]](#endnote-24) | |  | | | |

**Retraining (optional)**

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| Scenario name | Retraining | | | | |
| Step No. | Event[[25]](#endnote-25) | Name of process/Activity[[26]](#endnote-26) | Primary actor | Description of process/activity | Requirement |
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| Specification of retraining data[[27]](#endnote-27) | |  | | | |

**References**

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| References | | | | | | |
| No. | Type | Reference | Status | Impact on use case | Originator/organization | Link |
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**Footnote**

1. Leave this cell blank. [↑](#endnote-ref-1)
2. The scope defines the limits of the use case. [↑](#endnote-ref-2)
3. AI method(s)/framework(s) used. [↑](#endnote-ref-3)
4. Hardware system used. [↑](#endnote-ref-4)
5. Terms and concepts listed here can be used to extend the work of WG 1 (AWI 22989 and AWI 23053) as necessary. [↑](#endnote-ref-5)
6. Origin of data, which could be from instruments, IoT, web, surveys, commercial activity, or from simulations. [↑](#endnote-ref-6)
7. Structured/unstructured Images, voices, text, gene sequences, and numerical. Composite: time-series, graph-structured [↑](#endnote-ref-7)
8. The rate of flow at which the data is created, stored, analysed, or visualized. [↑](#endnote-ref-8)
9. Data from a number of domains and a number of data types. The wider range of data formats, logical models, timescales, and semantics complicates the integration of the variety of data. [↑](#endnote-ref-9)
10. Changes in data rate, format/structure, semantics, and/or quality. [↑](#endnote-ref-10)
11. Completeness and accuracy of the data with respect to semantic content as well as syntactical of the data (such as presence of missing fields or incorrect values) [↑](#endnote-ref-11)
12. Describe which condition(s) should have been met before this scenario happens. [↑](#endnote-ref-12)
13. Describe which condition(s) should prevail after this scenario happens. The post-condition may also define "success" or "failure" conditions. [↑](#endnote-ref-13)
14. The event that triggers the step. This might be completion of the previous event. [↑](#endnote-ref-14)
15. Action verbs should be used when naming activity. [↑](#endnote-ref-15)
16. Training data can be further specified. [↑](#endnote-ref-16)
17. The event that triggers the step. This might be completion of the previous event. [↑](#endnote-ref-17)
18. Action verbs should be used when naming activity. [↑](#endnote-ref-18)
19. Specify input of evaluation. [↑](#endnote-ref-19)
20. Specify output of evaluation. [↑](#endnote-ref-20)
21. The event that triggers the step. This might be completion of the previous event. [↑](#endnote-ref-21)
22. Action verbs should be used when naming activity. [↑](#endnote-ref-22)
23. Specify input of evaluation. [↑](#endnote-ref-23)
24. Specify output of evaluation. [↑](#endnote-ref-24)
25. The event that triggers the step. This might be completion of the previous event. [↑](#endnote-ref-25)
26. Action verbs should be used when naming activity. [↑](#endnote-ref-26)
27. Retraining data can be further specified. [↑](#endnote-ref-27)