Security vs. Privacy in Social Media
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Introduction
- Rapid explosion of Social Media, which contain user generated content.
- Multiple usage purposes (professional, amusement, communication, etc.).
- Users transfer their offline behavior to the online world [1].
- Changes in social dimensions of information sharing and (mis)use.
- Open Source INtelligence (OSINT) in the service of profiling and data processing.
- Constant battle between security and privacy in Social Media.

Security
- Insider threat prediction via Social Media using automated psychosocial evaluations.
- Examination of the predisposition towards malevolent behavior via Social Media.

Privacy
- User privacy over the Internet is at stake.
- ICT are often accused for facilitating surveillance exploiting Internet capabilities.
- Disclosure of sensitive information (political views, religion etc.).

Methodology:
- Examine user’s content (i.e. comments, videos, video lists), via machine learning techniques, so as to draw conclusions over the categories of interest it falls into.
- Draw video conclusions through its comments.

Insider Threat Prediction:
- Train classifier to detect content (comments) that expresses negative attitude towards law enforcement and authorities.

Political Profiling:
- Train classifier to detect Radical (R), Conservative (C) and Neutral (N) content in comments.

Logistic Regression

<table>
<thead>
<tr>
<th>Metrics</th>
<th>P</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Precision</td>
<td>86</td>
<td>76</td>
</tr>
<tr>
<td>Recall</td>
<td>74</td>
<td>88</td>
</tr>
<tr>
<td>F-Score</td>
<td>80</td>
<td>81</td>
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<tr>
<td>Accuracy</td>
<td>81</td>
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</table>

Multinomial Logistic Regression

<table>
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<tr>
<th>Metrics</th>
<th>R</th>
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<th>C</th>
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</thead>
<tbody>
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<td>Precision</td>
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<td>77</td>
</tr>
<tr>
<td>Recall</td>
<td>77</td>
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<td>77</td>
</tr>
<tr>
<td>Accuracy</td>
<td>87</td>
<td></td>
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</tr>
</tbody>
</table>

Predisposed negatively users towards law enforcement are likely to manifest malevolently.

Social Media and the Insider Threat

Twitter

<table>
<thead>
<tr>
<th>Category</th>
<th>Influence Valuation</th>
<th>Klout Score</th>
<th>Usage Valuation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loners</td>
<td>0 - 90</td>
<td>3.55 – 11.07</td>
<td>0 - 500</td>
</tr>
<tr>
<td>Individuals</td>
<td>90 - 283</td>
<td>11.07 – 26.0</td>
<td>500 - 4500</td>
</tr>
<tr>
<td>Know Users</td>
<td>283 - 1011</td>
<td>26.0 – 50.0</td>
<td>4500 - 21000</td>
</tr>
<tr>
<td>News Media &amp; Persons</td>
<td>1011 - 3604</td>
<td>50.0 – 81.99</td>
<td>21000 - 569000</td>
</tr>
</tbody>
</table>

Figure 2: Conclusion process

Figure 3: YouTube Tag Cloud

Figure 4: Multinomial Logistic Regression Metrics

Regarding their content, users can be classified into 3 broad categories of political affiliation.

Outlier’s common characteristics lead to the following user taxonomy:

Conclusions

Users assigned to category News Media & Persons express narcissistic behaviour.

References