Interaction Social Network Extraction from Texts (ISNET)
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In this presentation:

Interaction Social Network Extraction from Texts (ISNET)
In this presentation:

- Define Social Events (ACL-LAW IV 2010) -- 2 slides

Texts (ISNET) Interaction Social Network Extraction from Social Events People
In this presentation:

- Define Social Events (ACL-LAW IV 2010) -- 2 slides
- How we extract them (EMNLP 2010) -- 2 slides

Interaction Social Network Extraction from Texts (ISNET)
In this presentation:

1. Define Social Events (ACL-LAW IV 2010) -- 2 slides
2. How we extract them (EMNLP 2010) -- 2 slides
3. Can networks tell us something different? -- 6 slides
In this presentation:

- Define Social Events (ACL-LAW IV 2010) -- 2 slides
- How we extract them (EMNLP 2010) -- 2 slides
- Can networks tell us something different? -- 6 slides
- Network of Medical data -- 9 slides

Interaction Social Network Extraction from Texts (ISNET)
Between a pair of people (or group of people)
• Between a pair of people (or group of people)
• At least one is aware of the other and of the event
Social Events

- Between a pair of people (or group of people)
- At least one is aware of the other and of the event

Social Events (ACL-Law IV 2010)

B-diirectional relationship

Between a pair of people (or group of people)
• Between a pair of people (or group of people)
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Social Events (ACL-LAW IV 2010)

• Between a pair of people (or group of people)
• At least one is aware of the other and of the event

Directed Relationship

Interaction (INR)

Bi-directional Relationship

At least one is aware of the other and of the event

Between a pair of people (or group of people)

Social Events (ACL-LAW IV 2010)
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- Between a pair of people (or group of people)
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Interaction (INR)

Directed Relationship

Interaction (INR)

Bi-directed Relationship

Observation (OBS)

Social Events (ACL-LAW IV 2010)

Between a pair of people (or group of people)
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Social Events (ACL-LAW IV 2010)

- Between a pair of people (or group of people)
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Interaction (INR)

- Observation (OBS)

Directed Relationship

Bi-directional Relationship

ACE 2005 Corpus

- At least one is aware of the other and of the event
- Between a pair of people (or group of people)

Social Events (ACL-LAW IV 2010)
Toujjan Faisal, 54, said she was informed of the refusal by an Interior Ministry committee overseeing election preparations.
Social Events Example

Observation (OBS)

Toujan Faisal, 54, said she was informed of the refusal by an Interior Ministry committee overseeing election preparations.
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Social Events Example

Toujan Faisal, 54, said she was informed of the refusal by an Interior Ministry committee overseeing election preparations.

In the paper:

- Observation (OBS)
- Interaction (INR)
- Sub-categorization of these broad categories

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- Sub-categorization of these broad categories
- Observation (OBS)
- Interaction (INR)

Committee overseeing election preparations of the refusal by an Interior Ministry.

Toujan Faisal, 54, said she was informed.

Social Events Example

Monday, November 5, 12
Toujan Faisal, 54, said she was informed of the refusal by an Interior Ministry committee overseeing election preparations.

In the paper:

- Sub-categorization of these broad categories
- Observation (OBS)
- Interaction (INR)

Committee overseeing election preparations.

Toujan Faisal, 54, said she was informed.
Toujan Faisal, 54, said she was informed of the refusal by an Interior Ministry committee overseeing election preparations. In the paper:

- Sub-categorization of these broad categories
- Inter-annotator agreement
- Kappa for event detection: 68%

Social Events Example

Monday, November 5, 12

Observation (OBS)

Interaction (INR)

Sub-categorization of these broad categories

Committee overseeing election preparations

of the refusal by an Interior Ministry

Toujan Faisal, 54, said she was informed

Social Events Example
Toujan Faisal, 54, said she was informed of the refusal by an Interior Ministry committee overseeing election preparations.

In the paper:

- Kappa for event classification: 91%
- Kappa for event detection: 68%
- Inter-annotator agreement
- Sub-categorization of these broad categories

Observation (OBS)

Interaction (INR)

Sub-categorization of these broad categories

Committee overseeing election preparations

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Social Events Example
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Detection and Classification of Social Events
Detection and Classification of Social Events

Approach motivation: Nguyen et al., 2009

EMNLP 2010

Detection and Classification of Social Events

Detection and Classification of Social Events
Detection and Classification of Social Events


- Tree Kernels (Phrase Structure and Dependency)
- Subsequence paths in the trees
- Tree Kernels
Detection and Classification of Social Events (EMNLP 2010)
Detection and Classification of Social Events

EMNLP 2010

- SVM with kernels: 5-fold cross-validation
- 172 INR, 174 OBS, 1291 NO Relation
- 138 ACE documents

Detection and Classification of Social Events
Detection and Classification of Social Events

<table>
<thead>
<tr>
<th>Event Detection (%)F1</th>
<th>Classification (%Acc)</th>
<th>PET-GR</th>
<th>PET-GR_SqGRW</th>
<th>GR_SqGRW</th>
</tr>
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<td>76.6</td>
<td>54.5</td>
<td></td>
<td></td>
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<td>78.7</td>
<td>61.1</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>76.3</td>
<td>60.6</td>
<td></td>
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</tr>
</tbody>
</table>

- SVM with kernels: 5-fold cross-validation
- 138 ACE documents
- 172 INR, 174 OBS, 1291 No Relation
- 138 ACE documents

Detection and Classification of Social Events (EMNLP 2010)
• Defined Social Events
• Annotated news corpus
• Built a preliminary system that detects and classifies social events

Till now...
• Defined Social Events
• Annotated news corpus
• Built a preliminary system that detects and classifies social events

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Till now...

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ISNET

- Literary texts
- Historical texts
- Journalistic texts

TODO: Domain Adaptation

TODO: Add semantic kernels

Monday, November 5, 12
Till now...

TODO: Domain Adaptation

• Defined Social Events
• Annotated news corpus
• Built a preliminary system that detects and classifies social events

TODO: Sentiment Analysis

• Literary texts
• Historical texts
• Journalistic texts

TODO: Add semantic kernels

News

• Journalistic texts
• Historical texts
• Literary texts