Retrieving Implicit Information for Stock Movement Prediction

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Main Concept – Implicit Information
• Previous Work: Predict the Stock Movement of Sony (Mentioned in the News Article)
• This Paper: Predict the Stock Movement of Supply Chain Vendors (Not Mentioned in the News Article)

News Distilling Network

Stock Movement Prediction

<table>
<thead>
<tr>
<th>Model</th>
<th>Acc. (%)</th>
<th>MCC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Random Guess</td>
<td>50.77</td>
<td>0.0147</td>
</tr>
<tr>
<td>BoW + Random Forest</td>
<td>50.97</td>
<td>0.0159</td>
</tr>
<tr>
<td>FastText + Random Forest</td>
<td>52.83</td>
<td>0.0485</td>
</tr>
<tr>
<td>HAN</td>
<td>54.37</td>
<td>0.0788</td>
</tr>
<tr>
<td>HANₐ₁</td>
<td>53.85</td>
<td>0.0736</td>
</tr>
<tr>
<td>NDNₐ₁ (Proposed)</td>
<td>56.75*</td>
<td>0.1302*</td>
</tr>
<tr>
<td>HANₐ₂</td>
<td>56.77*</td>
<td>0.1300*</td>
</tr>
<tr>
<td>NDNₐ₂ (Proposed)</td>
<td>57.89*</td>
<td>0.1536*</td>
</tr>
</tbody>
</table>

Dataset
• Ground Truth
• Dataset

Backtesting

Related Works
• From Opinion Mining to Financial Argument Mining. Springer Book
• Dynamic Graph Transformer for Implicit Tag Recognition. EACL’21
• FinSense: An Assistant System for Financial Journalists and Investors. WSDM’21

Related Events
• FinNum-3 Shared Task @ NTCIR-2022 – Investor's and Manager’s Fine-grained Claim Detection
• The Third Workshop of Financial Technology and Natural Language Processing @ IJCAI-2021
• The 2nd Workshop on Financial Technology on the Web (FinWeb-2022) (May be in conjunction with WWW'22)
• EMNLP-2021 Tutorial: Financial Opinion Mining

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