Saved You a Click: Automatically Answering Clickbait Titles
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Problem
- We all hate click baits, yet we do want to know the answer...
- If only we could get the answer without having to read the article...

Background
- No, it will hit the far side."
- Teaser

Datasets
- Scraped our own data set
  - Reddit page ‘r/SaveYouAClick’ n = 2538 (after filtering)
  - Facebook page ‘StopClickbait’ n =1287 (after filtering)

Method
- input: clickbait title
  - pre-trained RoBERTa
  - RoBERTa (extractive Q&A)
  - T5 model (abstractive Q&A)
- output: extractive answer
  - output: abstractive answer

Results

<table>
<thead>
<tr>
<th>Evaluation on Stop Clickbait test set</th>
<th>F1 Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>ROUGE-1</td>
</tr>
<tr>
<td>Pretrained Squad 2.0</td>
<td>12.57</td>
</tr>
<tr>
<td>Pretrained Squad 2.0 Finetuned on SavedYouAClick</td>
<td>26.11</td>
</tr>
<tr>
<td>Pretrained NewsQA</td>
<td>13.72</td>
</tr>
<tr>
<td>Pretrained NewsQA Finetuned on SavedYouAClick</td>
<td>27.21</td>
</tr>
<tr>
<td>Abstractive (T5)</td>
<td>11.52</td>
</tr>
<tr>
<td>Not finetuned on StopClickbait</td>
<td>28.99</td>
</tr>
<tr>
<td>Finetuned on StopClickbait</td>
<td></td>
</tr>
</tbody>
</table>

Analysis
- Abstractive method produces more complete sentences than extractive methods
- After finetuning, extractive method produced longer spans of text from the article as the answer to the clickbait
- After finetuning, abstractive method improved significantly and consistently in accuracy. The original problem of frequently returning ‘No answer available in context’ is completely resolved.
- ROUGE metrics comparable, but abstractive wins for BERTscore (which may be more meaningful as references often paraphrased)

Conclusion
- Investigated multiple NLP approaches to automatically answer clickbait articles
- Certain types of questions performed better with Abstractive and Extractive methods

Future Work
- Using automatic span detection to create additional training examples for extractive model (human annotation even better)
- Future method could combine both approaches in system to and choose best answer

Left: F1 Bert score on validation set when training Abstractive (T5) Model
Further Left: Facebook data example