your title

Your Name

Department of Computer Science
TALP Group

Advisors:
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PhD Thesis Defense
Feb 10, 2021

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Highlight with a block

A Fixed lexicon [some text].

B Lexicon free [some text].

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Add Block in order A ...

A **Lack of public dataset:** Most state-of-art deep ......

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A **Lack of public dataset:** Most state-of-art deep ......

B **Fast and easy to re-train:** Statistical Language ....

C The system can be used as a .....

D This **hybrid approach** between deep learning .....

Literature review block

Work addresses scene understanding, and benefit from combining text cue and visual context in image or text retrieval:

Lexicon Generation
Patel et al. (2016)

generation of new lexicon with **topic modeling**

Logo Retrieval
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learn **textual information** from logos

Text detection
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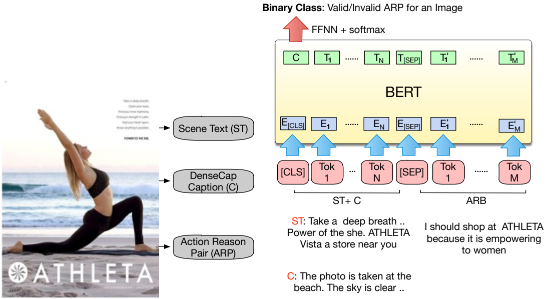
Image

- The task involves detecting the viewer's interpretation of an Ad image captured as text.
- Fine-tune BERT is used to learn textual and visual cues.
- Google Vision API is used to extract scene text information.



Table

- The ULM is based on a combined corpu ....

Unique Count of Textual Data				
Dictionary	words	nouns	verb	adjectives
Dict-90K words level	87,629	20,146	6,956	15,534
Language model	8870,209	2695,906	139,385	824,581

Fade out text

- The main limitation of this approach is that **depends on the baseline softmax** output to re-rank the most closely related word

As in the example, the semantic relatedness score **suppresses unrelated words** and **boosts the most probably related word** by simple dot product multiplication. (Visual context: parking meters)

w	Text Spotting Model		Visual Re-ranker Model
w_1	quotas	0.5	5.4e-7
w_2	quartos	0.1	5.2e-8
w_3	**quarters**	0.05	9.0e-9

Math block

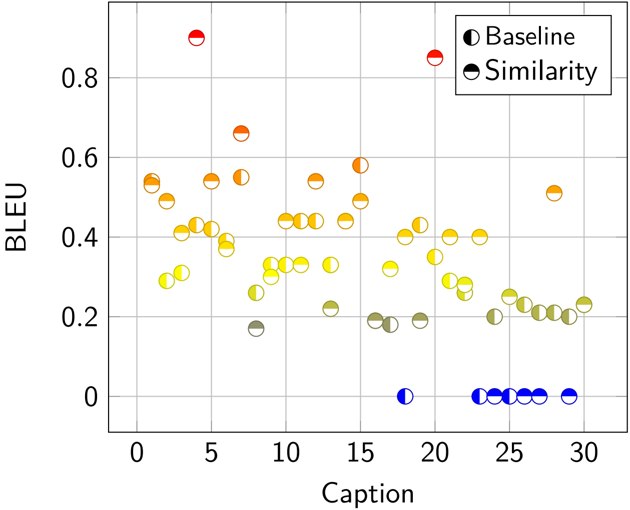
Attention 1

$$c_t = \sum_{j=1}^{T} \alpha_{tj} h_j, \alpha_{tj} = \frac{\exp\left(e_{tj}\right)}{\sum_{k=1}^{T} \exp\left(e_{tk}\right)}, e_{tj} = a\left(s_{t-1}, h_j\right)$$

Attention 2

$$c_t = \sum_{j=1}^{T} \alpha_{tj} h_j, \alpha_{tj} = \frac{\exp\left(e_{tj}\right)}{\sum_{k=1}^{T} \exp\left(e_{tk}\right)}, e_{tj} = a\left(\cancel{s_{t-1}}, h_j\right)$$

Figure


Baseline
Similarity
BLEU
Caption
0.8
0.6
0.4
0.2
0
0
5
10
15
20
25
30