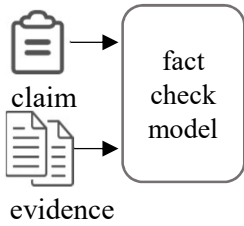




# RU22Fact: Optimizing Evidence for Multilingual Explainable Fact-Checking on Russia-Ukraine Conflict



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## Motivation

- High-quality evidence plays a vital role in fact-checking systems
- How to providing sufficient and relevant evidence for the fact-checking system?

## Evidence analysis

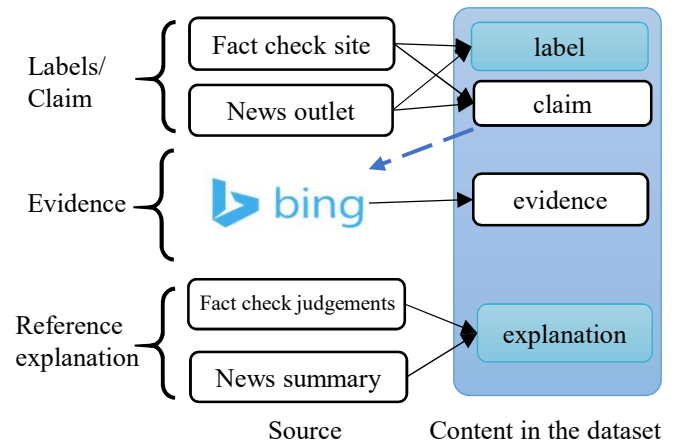
- Method to get optimized evidence: an LLMs-driven method to automatically retrieve and summarize documents from the Web
- Extend an existing fact checking dataset XFact with optimized evidence (OE)
- Show optimized evidence are better than the original evidence

Model	$\alpha_1$	$\alpha_2$	$\alpha_3$
Attn-EA	38.9	15.7	16.5
Attn-EA+Meta	41.9	15.4	16.0
Attn-EA+OE	40.37	<b>17.29</b>	18.90
Attn-EA+Meta+OE	<b>42.71</b>	17.14	<b>19.59</b>

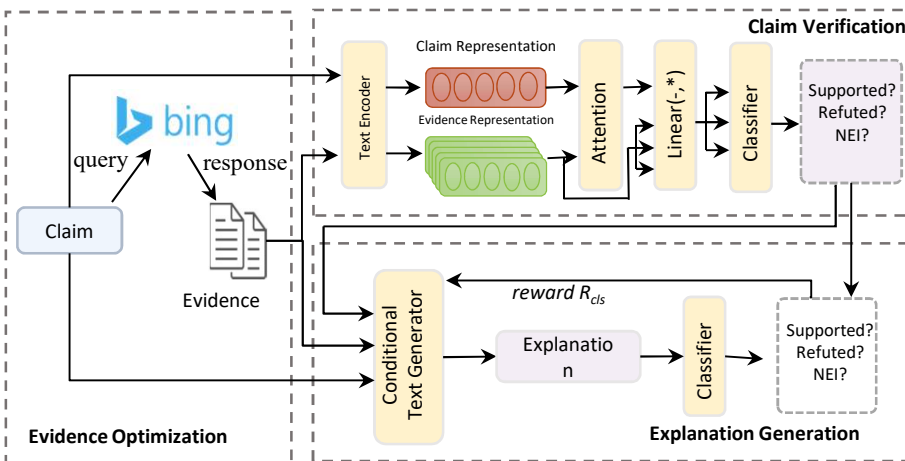
## Dataset: RU22Fact

- An interpretable fact-checking datasets in Chinese, English, Russian and Ukrainian.
- Topic in Russia-Ukraine conflict in 2022.

Language	Train	Dev	Test	Total
English	6,082	867	1,741	8,690
Chinese	1,055	152	305	1,512
Russia	1,621	231	465	3,399
Ukrainian	2,458	350	704	2,430
Total	11,217	1,600	3,216	16,033
#Support Labels	10,081			
#Refuted Labels	4,651			
#NEI Labels	1,301			



## Baseline Experiment



Fact-checking system(FCS) baseline in RU22Fact

### Claim Verification

Settings	Pr	Rc	F1
$FCS_{XLM-R}$	57.56	<b>63.57</b>	59.91
$FCS_{dBert}$	<b>74.30</b>	63.49	60.40
$FCS_{mBert}$	58.31	62.91	<b>60.56</b>

### Explanation Generation

Method	SGC	WGC	LC
	Human		
Referenced Explanation	<b>58.23</b>	<b>96.63</b>	<b>93.38</b>
$FCS_{bart}$	43.97	92.08	90.14
$FCS_{t5}$	40.29	91.62	90.47
$GPT3.5$	53.29	95.73	90.52
BERT <sub>z</sub> ;MNL1			
Referenced Explanation	37.72	<b>60.17</b>	<b>60.36</b>
$FCS_{bart}$	45.52	59.94	53.02
$FCS_{t5}$	<b>46.64</b>	58.77	49.79
$GPT3.5$	37.18	59.74	54.84
RoBERTa;MNL1			
Referenced Explanation	<b>24.13</b>	<b>94.96</b>	<b>90.03</b>
$FCS_{bart}$	20.26	93.31	87.51
$FCS_{t5}$	19.46	94.26	85.41
$GPT3.5$	21.78	94.65	88.56