**Automated Fact Checking**

[SilentFlame/Fact-Checker](https://github.com/SilentFlame/Fact-Checker)

**1. Create Facts Database** ([link](https://en.wikipedia.org/wiki/Comparison_of_triplestores))

Source: DBpedia ([SPARQL Endpoint interface to Python](https://rdflib.github.io/sparqlwrapper/))

Format: triplestores (subject-predicate-object databases)

**2. Create Claims List**

Source: Test articles

Format: RDF Triple (Subject-Predicate-Object)

Create a triplet

* Run sentence through stanford parser
* Sentence (S) consists of:
  + Noun phrase (NP)
  + Verbal phrase (VP)
  + Full stop (.)
* Sentence subject: BFS to select first descendent of NP that is noun
* Sentence predicate: search VP deepest verb descendent of verb phrase (VBN)
* Objects: search in VP subtrees: PP (prepositional phrase), NP and ADJP (adjective phrase). Search for first noun in NP and PP, search first adjective in ADJP
* Create list of subject-verb-object triple, target.
* Calculate Wu-Palmer similarity metric between target triplet and triplets of all sentences.
* If Wu-Palmer >0.5 for both verb and object, target is True, else False.
  + Score = 2 \* depth(lcs) / (depth(s1) + depth(s2)), 0 < score <= 1
* WordNet compares synonymy between words

**3. Calculate Similarity Metric**

Source: WordNet

Formula: Wu-Palmer