

M2 Software Project

Online App for Knowledge Substantiation

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Overview

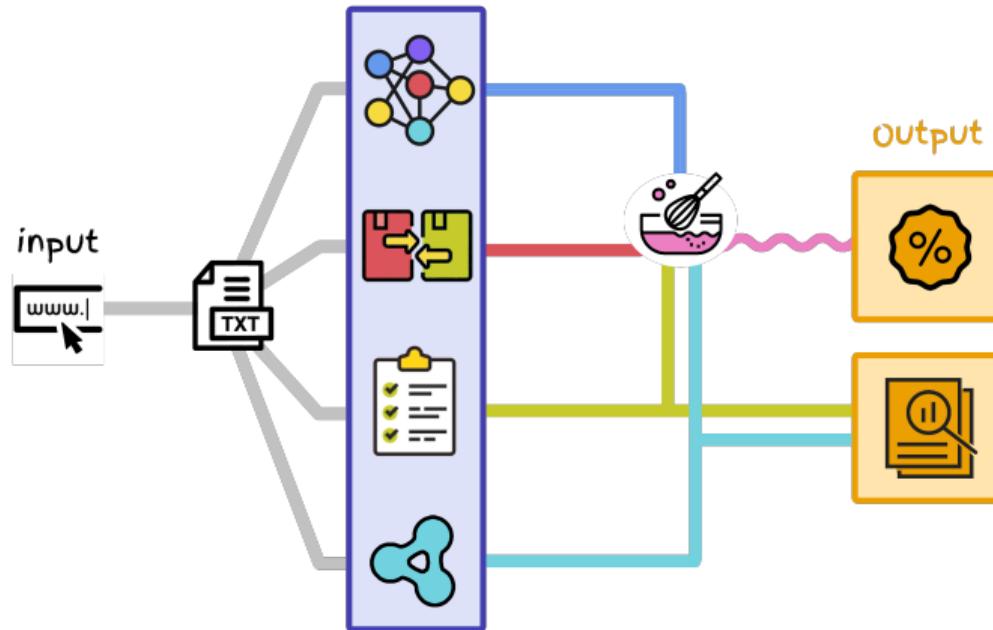


Figure: Back-end Pipeline. In the purple box, are the modules, from top to bottom: (1) NN, (2) cross-checking, (3) rule-based, (4) KB. The yellow boxes present the output: (a) a score, and (b) additional insights.

Overview

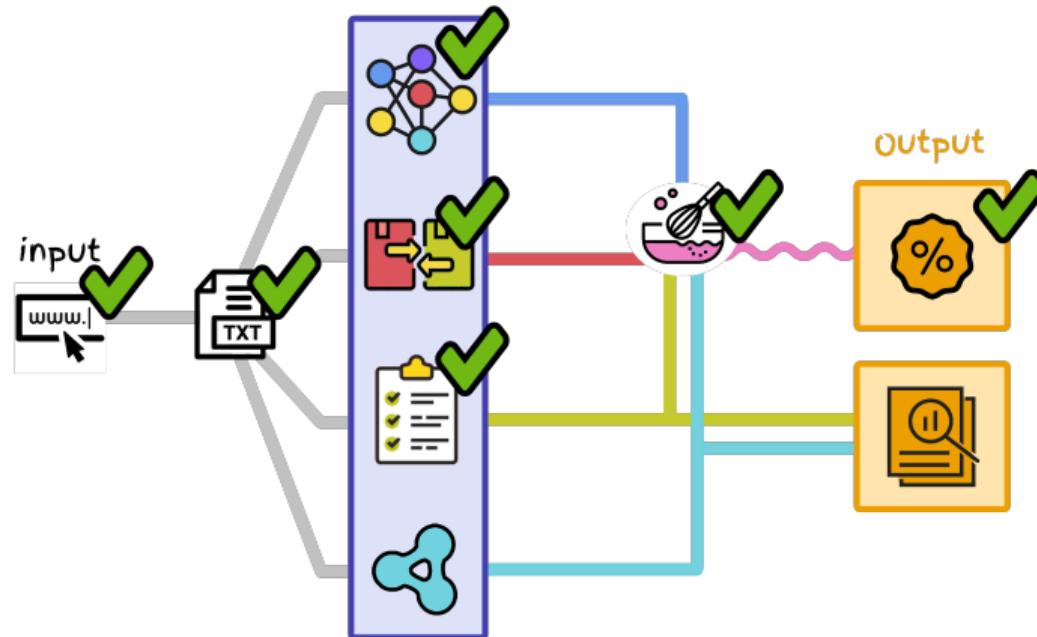


Figure: Back-end Pipeline current state.

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GUI options

- ✗ Extension → browser-dependent restrictions
- ✓ Web-app → ideal multi-platform compatibility

GUI Structure

Website - Homepage

The screenshot shows a dark-themed website homepage. At the top left is a logo with the letters 'JAKS'. To its right are 'Features' and 'About Us' links. A search bar with a magnifying glass icon and a 'Search' button are positioned at the top right. The main content area features a large, stylized graphic of a tree or plant on the left. Overlaid on the tree are several text snippets and a yellow call-to-action box. The text snippets include: 'Get your facts straight!', 'Try our Online App for Knowledge Substantiation', 'Check an article', and various event details like 'Eugene Net to Business Net working group, 11:00am' and 'Springfield 2nd Friday Art Walk 6pm-9pm, downtown library'. The overall aesthetic is modern and informative.

Are you getting real information?

Check how likely you are to be reading fake news. Are the sources credible? Is it a piece of propaganda? Are the claims founded? Discover in one click!



Have a look at some advanced insights

Take a peek at how our algorithm works and why it thinks your news sources are lying! Feel free to check all the stats to better understand our results.



Our Team



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GUI Structure

The screenshot shows the homepage of a website called FACTS. At the top, there's a navigation bar with the logo 'FACTS' and links for 'Features' and 'About Us'. Below the header, there's a large banner with a dark background featuring a faint, stylized floral or leaf pattern. On the left side of the banner, the text 'Get your facts straight!' is displayed in yellow, bold, sans-serif font. Below this, there's a subtext: 'Try our Online App for Knowledge Substantiation'. A yellow button labeled 'Check an article' is positioned below the subtext. To the right of the banner, there are several news snippets in white text:

- Agreement Commission, 7-10am Springfield Library, 225 Fifth St. Spfd. FREE.
- Progressive Business Meet, 10am, 12pm, 2pm, 4pm, 6pm, 8pm, 10pm.
- Helping for Seniors, 1-4pm Springfield Library, 225 Fifth St. Spfd. FREE.
- Green Drinks, gathering of progressives, 5-7pm, New Day Cafe, 440 Main Blvd. FREE.
- Springfield 2nd Friday Art Walk w/Marsha Limwood, several locations, 5-30pm, starts at Springfield City Hall Gallery, 225 Main St. FREE.
- Group for Adults, strength based, solution oriented, 5-9pm, Irving Garage, 1011 Irvington Dr. FREE.

At the bottom of the page, there's a form field with the placeholder 'Enter URL.' and a blue 'Check' button.

This screenshot shows a detailed article page. At the top, there's a header with the 'FACTS' logo and a 'Go Back' link. Below the header, there's a dark banner with a repeating pattern of small white shapes. The main content area contains two columns of text. The first column includes the following text:

Agreement Commission, 7-10am Springfield Library, 225 Fifth St. Spfd. FREE.

Helping for Seniors, 1-4pm Springfield Library, 225 Fifth St. Spfd. FREE.

Green Drinks, gathering of progressives, 5-7pm, New Day Cafe, 440 Main Blvd. FREE.

Springfield 2nd Friday Art Walk w/Marsha Limwood, several locations, 5-30pm, starts at Springfield City Hall Gallery, 225 Main St. FREE.

Group for Adults, strength based, solution oriented, 5-9pm, Irving Garage, 1011 Irvington Dr. FREE.

The second column continues with:

4-5:30pm, downtown library FREE.

Green Drinks, gathering of progressives, 5-7pm, New Day Cafe, 440 Main Blvd. FREE.

Springfield 2nd Friday Art Walk w/Marsha Limwood, several locations, 5-30pm, starts at Springfield City Hall Gallery, 225 Main St. FREE.

Group for Adults, strength based, solution oriented, 5-9pm, Irving Garage, 1011 Irvington Dr. FREE.

The likelihood of this article
to be fake is of 3.14%

More features are coming, such as statistics and algorithm insights...
Stay tuned!



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Knowledge Base

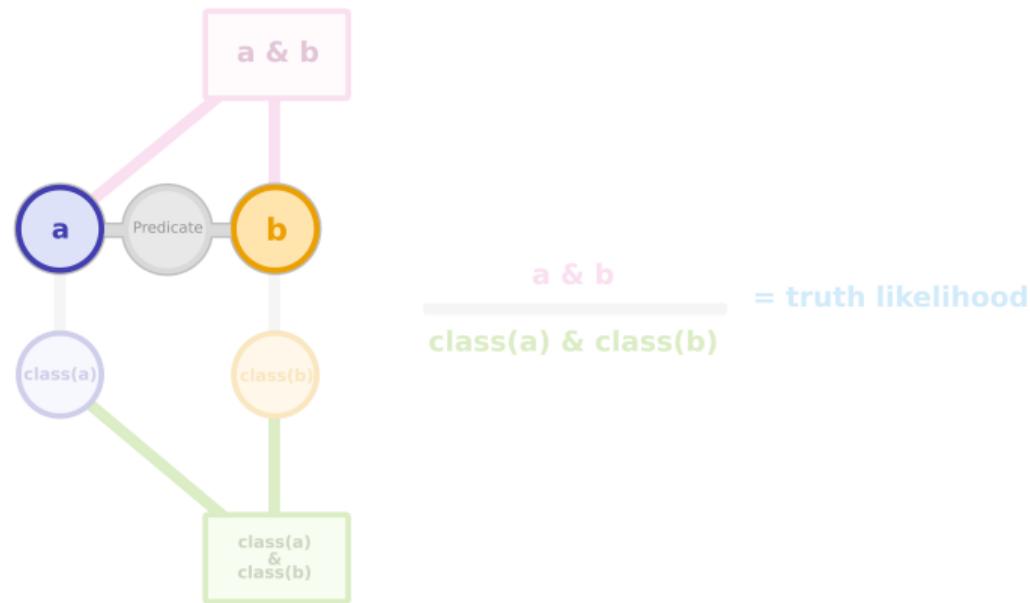


Figure: KB Pipeline: (1) extract a triple [...]

Knowledge Base

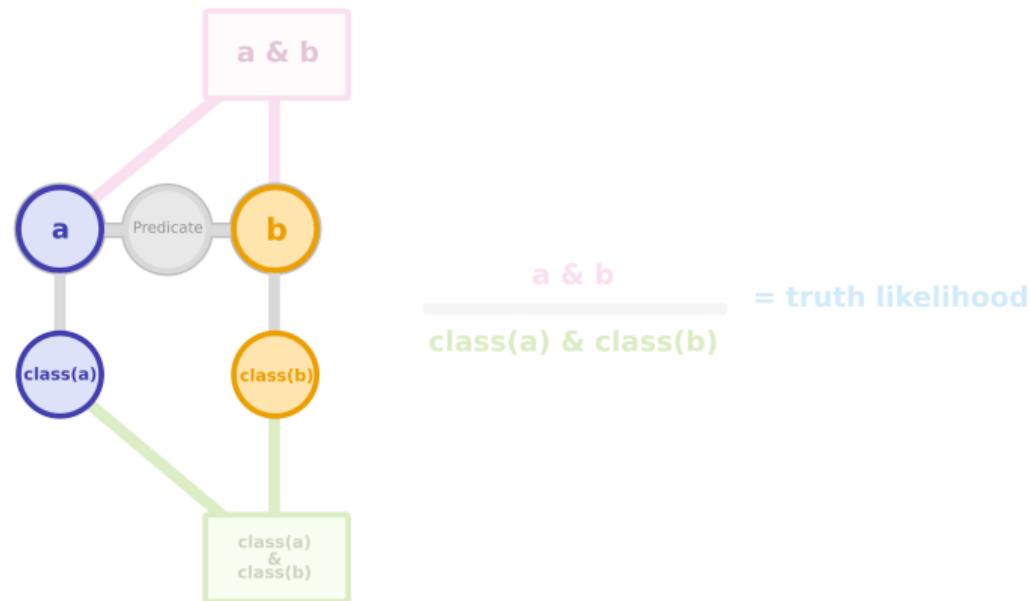


Figure: KB Pipeline: (1) extract a triple; (2) find the classes of subject a and object b [...]

Knowledge Base

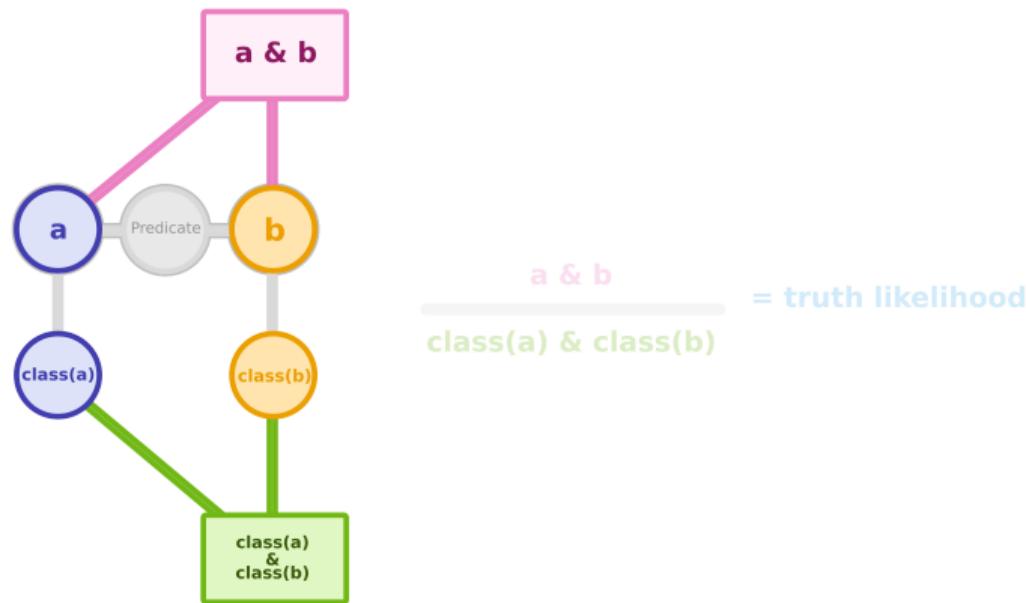


Figure: KB Pipeline: (1) extract a triple; (2) find the classes of subject *a* and object *b*; (3) count instances of triples containing *a* and *b* vs. those containing any member of such *class(a)* with any member of *class(b)* [...]

Knowledge Base

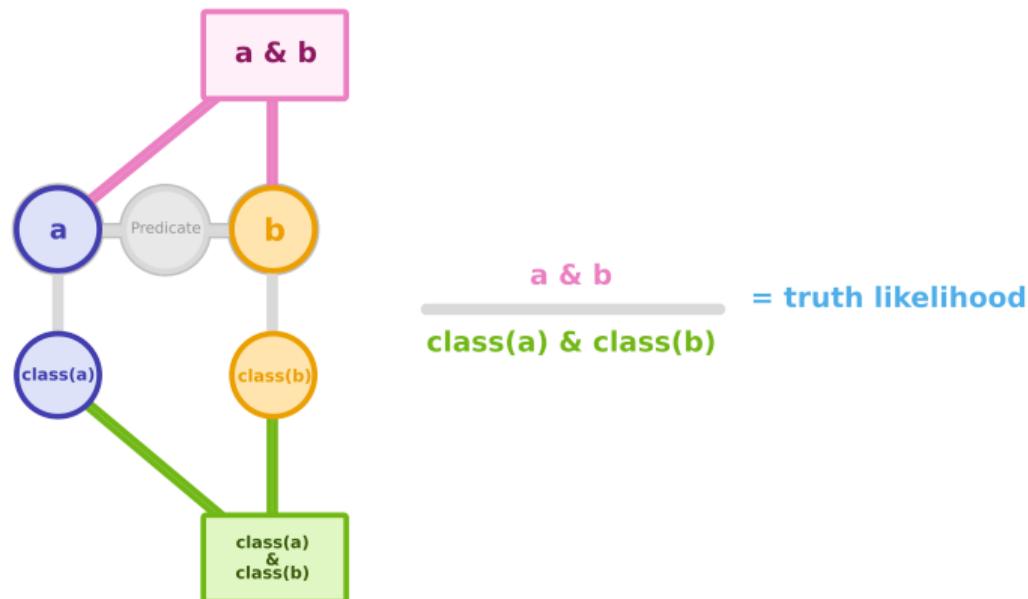


Figure: KB Pipeline: (1) extract a triple; (2) find the classes of subject a and object b ; (3) count instances of triples containing a and b vs. those containing any member of such $class(a)$ with any member of $class(b)$ in a corpus; (4) calculate the ratio.

Steps for development

To Do

- ✗ Class extraction → searching tools...
- ✗ RDF database selection Wikidata?
- ✗ Calculating score → end of KB pipe

Done

- ✓ Triple extraction → FRED

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Ensemble architecture

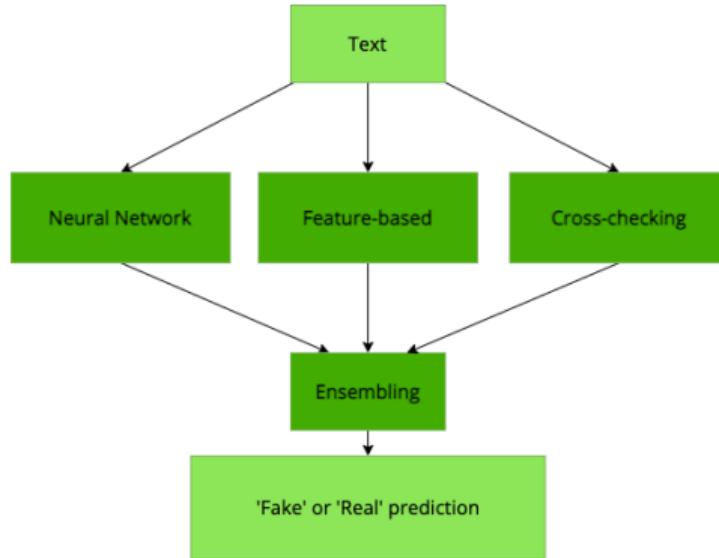


Figure: Ensemble architecture

Feature-based Module

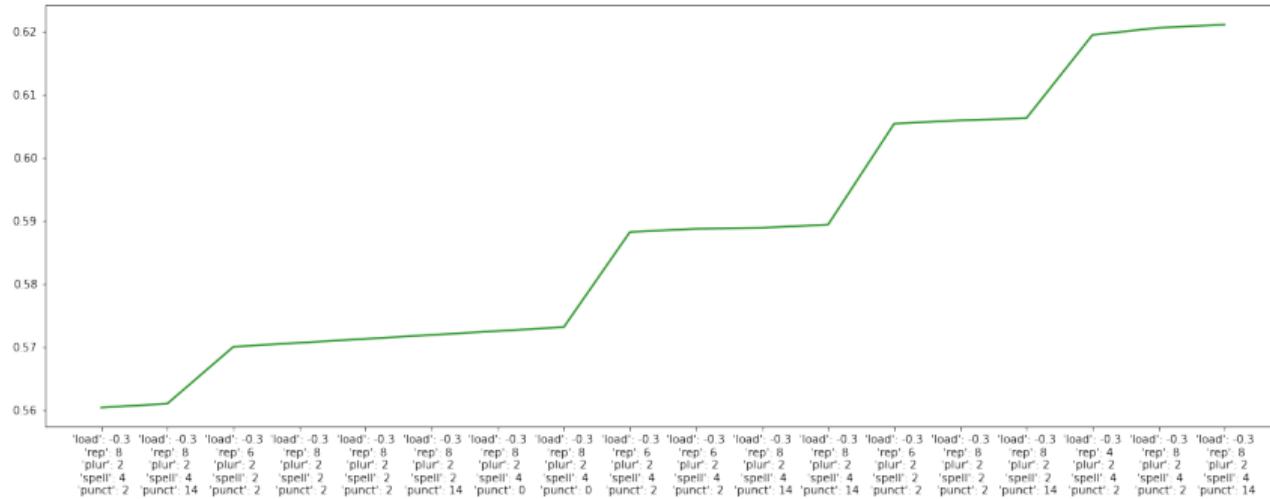


Figure: Hyper-parameters search for Feature-based Module

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Next steps

Connect **back-end to front-end** to have an end-to-end pipeline

Fine-tuning the **thresholds** for the ensemble of 4 modules

Finish the basic implementation of the **KB Pipeline**

Add **insight features** for the user (*according to the time available*)

thank
you

