

AI and Participation

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Hello, world!

Research Scientist at the Wikimedia Foundation focused on content integrity and resilience to disinformation in Wikipedia and other free knowledge projects.



Adjunct Professor at Universitat Pompeu Fabra for the master course in Web Intelligence.



Collaborator of public institutions for projects on data, technology, and citizen participation.
Member of Decidim, the web platform for participatory democracy.



Former researcher at Barcelona Media, Eurecat - Technology Centre of Catalonia, and the Oxford Internet Institute - University of Oxford for projects on computational social science, social media, digital humanities, and big data.



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Artificial Intelligence: Wikimedia Research ecosystem

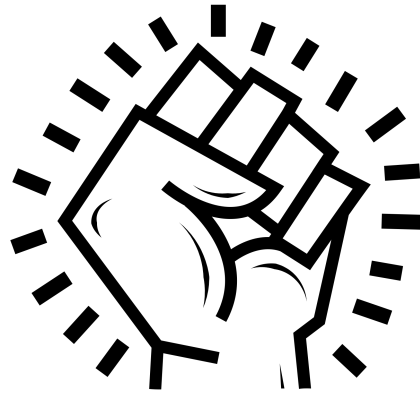


WIKIMEDIA
FOUNDATION

WMF research team's programs



Address
Knowledge
Gaps



Improve
Knowledge
Integrity



Grow the
Research
Community

WMF research team's programs



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Addressing knowledge gaps with AI/ML

The screenshot shows the Wikipedia Meta page for the article "Machine learning models/Proposed/Language-agnostic Wikipedia article quality". The page includes a search bar, navigation links, and a main content area with a description of the model card, a motivation section, and a model information hub. A sidebar on the left contains navigation options, and a sidebar on the right contains tool links.

WIKIMEDIA META-WIKI

Search Meta Search

English Pablo (WMF) [Icons]

Machine learning models/Proposed/Language-agnostic Wikipedia article quality

Content page Discussion Read Edit View history

< Machine learning models

This model card describes a model for predicting the quality of Wikipedia articles. It uses structural features extracted from the article and a simple set of weights and wiki-specific normalization criteria to label Wikipedia articles in any language with a score between 0 and 1 (that can then be mapped to more recognized article quality classes such as Stubs). These scores are relative to a given language edition (not directly comparable across languages). The weights and feature selection were trained on editor assessments from Arabic, English, and French Wikipedia. This model is a prototype and may still be substantially updated.

Motivation

Wikipedia articles range in quality from rich, well-illustrated, fully-referenced articles that fully cover their topic and are easy to read to single sentence stubs that define the topic of the article but do not offer much more information. It is very useful to be able to reliably distinguish between these extremes and the various stages of quality along this spectrum. Wikipedia editors have developed rich rubrics for how to evaluate the quality of Wikipedia articles and are constantly assessing article quality to assist in coordinating work on the wikis (English Wikipedia example). Editors use these quality scores to evaluate and prioritize their work. Researchers use these quality scores to understand content dynamics. Developers use these quality scores as filters when building recommender systems or other tools.

Wikipedia is ever-changing though, which makes it time-consuming (and largely impossible) for editors to keep these quality assessments complete and up-to-date. An automatic quality model can help fill these gaps by evaluating the quality for articles that are unassessed or have changed substantially since they were last assessed. In doing so, it can provide researchers and tool developers with more consistent data and even potentially help editors identify articles that would benefit from a human assessment. Initial models were language-specific, which allowed them to be finely-tuned to the dynamics and existing quality classes of a particular language edition. This model approach is language-agnostic (works for all Wikipedia language editions). The model may require further fine-tuning for a given community to better align its scores with existing quality classes, but this approach ensures that all language editions, even those lacking their own quality assessment schema, can benefit from these labels.

Model card

This page is an on-wiki machine learning model card.

A diagram of a neural network with two input nodes, three hidden nodes, and one output node.

A model card is a document about a machine learning model that seeks to answer basic questions about the model.

Model Information Hub

Model creator(s)	Isaac Johnson
Model owner(s)	Isaac Johnson
Model interface	English Wikipedia example
Past performance	documentation
Code	GitHub
Uses PII	No

This model uses the structure and size of an article to predict quality scores for Wikipedia articles.

Tools [hide]

- Actions
- Move
- Subscribe
- General
- What links here
- Related changes
- Special pages
- Permanent link
- Page information
- Cite this page
- Add interlanguage links
- Print/export
- Create a book
- Download as PDF
- Printable version

https://meta.wikimedia.org/wiki/Machine_learning_models/Proposed/Language-agnostic_Wikipedia_article_quality

Improving knowledge integrity with AI/ML

The screenshot shows the Wikimedia Meta-Wiki interface. At the top left is the Wikimedia logo. A search bar is located at the top center. The page title is "Machine learning models/Proposed/Language-agnostic revert risk". Below the title are navigation links for "Content page" and "Discussion". A warning box states: "This model card page currently has a **draft status**. It is a piece of model documentation that is in the process of being written. Once the model card is completed, this template should be removed." The main content area contains a paragraph about the goal of the model, a diagram of a neural network, and a section titled "Model Information Hub". The diagram shows a neural network with three input nodes, two hidden nodes, and one output node. The "Model Information Hub" section states: "This model uses revision content and metadata to predict the risk of being reverted." The right sidebar contains various tools and actions like "Tools [hide]", "Actions", "Move", "Subscribe", "General", "What links here", "Related changes", "Special pages", "Permanent link", "Page information", "Cite this page", "Add interlanguage links", "Print/export", "Create a book", "Download as PDF", and "Printable version".

https://meta.wikimedia.org/wiki/Machine_learning_models/Proposed/Language-agnostic_revert_risk

Open

Training and inference code are open and public

Reliable and Scalable

In collaboration with the ML Platform Team

Multilingual

Preferring Language-Agnostic approaches, to give the same opportunities to all our communities

Explainable

Explainability is as important as accuracy

Community-centered

Communities are encouraged to provide feedback or report biases, to continuously improve models



Our principles for AI/ML models





Artificial Intelligence: Decidim ecosystem

Free open-source participatory democracy for cities and organizations

decidim features



proposals your ideas in detail

The participatory texts component can be used to convert lengthy text documents into various proposals or results and, vice versa, to compose and display a unified text based on a collection of proposals or results.



results no proposal without an answer

The results component is used to turn proposals into results and give official responses concerning their acceptance or rejection, merging various proposals into a single result.



meetings to meet and not miss anything

The meeting component offers organizations and participants the opportunity to convene meetings, determine their location and time, register and limit attendees, define the structure and content of the meeting as well as publishing the minutes, and the resulting proposals.



voting decide your vote

The voting component offers organizations the possibility of activating different voting or support systems around proposals: unlimited, limited to a given threshold, weighted, cost-based, etc.



accountability transparency from beginning to end

The accountability component offers the possibility of subdividing results into projects, defining and applying progress statuses around their implementation, as well as displaying the extent of the results' implementation grouped by categories and scopes.



participatory texts to analyze, synthesize, and build in common

The participatory texts component can be used to convert lengthy text documents into various proposals or results and, vice versa, to compose and display a unified text based on a collection of proposals or results.



conference where big events are premiered

The conference component allows an organization to create a website for a big event by joining up a series predefined meetings (chats, workshops etc.), putting together a unified program and managing attendees.



comments building a collective intelligence

The comments component enables users to add comments, to identify the comment as being in favor, against or neutral in relation to the commented object, to vote comments, respond to them and to receive notifications about responses.



newsletter simple but powerful

The newsletter component makes possible to send emails to everyone registered in the platform or, more selectively, to those who participate in a specific space.



surveys because the opinion of your community matters

The surveys component can be used to design and publish surveys and to display and download their results.



pages and blogs your community, informed and up to date

The pages component is used to create informative pages with rich text formatting, embedded pictures and videos. The blog component makes possible the creation of posts or news, and to navigate them chronologically.



sortition equality and the justice of randomness

The sortition component allows to select a number of proposals (e.g. candidates for a jury) with random, yet reproducible, procedures that guarantees non-biased and uniform distributions.



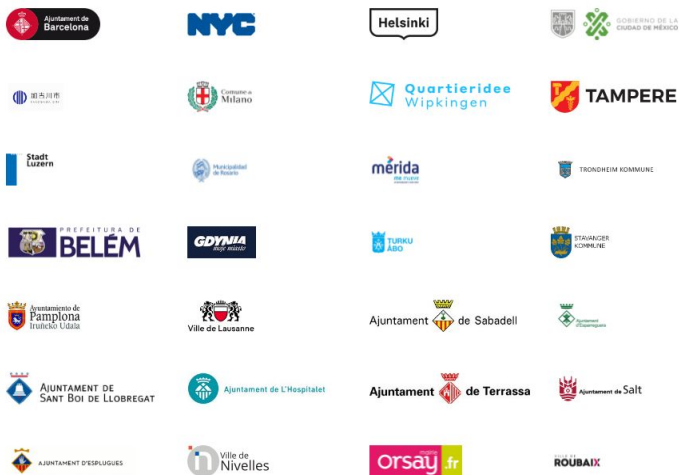
notifications personalized information on interesting contents

Decidim enables you to track any space or component to receive updates every time they happen.

Over 400 organizations already use Decidim

30 countries | 240 public institutions | 180 social organizations

cities



regions



organizations





decidim

decidim is a digital infrastructure for participatory democracy led by the Barcelona City Council with contributors and collaborators all around the world

<https://decidim.org> hola@decidim.org

Repositories 38

People 51

Teams 16

Projects 8

Settings

Pinned repositories

[Customize pinned repositories](#)

decidim

The participatory democracy framework. A generator and multiple gems made with Ruby on Rails.

Ruby 392 113

docs-features

Decidim features and future roadmap documentation (English, Spanish & Catalan)

2 2

Type: **All** ▾

Language: **All** ▾

New

decidim

The participatory democracy framework. A generator and multiple gems made with Ruby on Rails.



[government](#) [community](#) [engine](#) [democracy](#) [open-data](#) [civic-tech](#)

Ruby 392 113 AGPL-3.0 Updated 3 hours ago

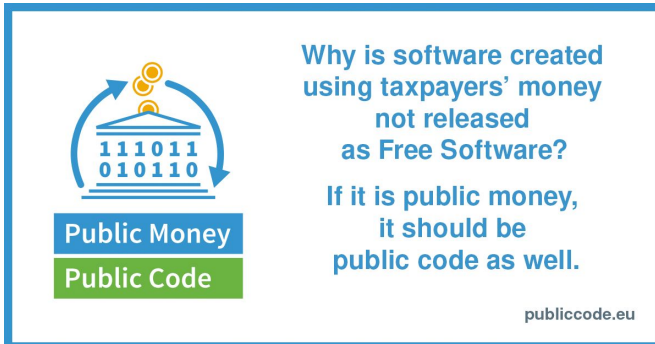
Code repositories:

<https://github.com/decidim>

/Principles

Software license

GNU Affero General Public License v3.0



The infographic features a central graphic of a classical building facade with the binary code '111011' and '010110' on its front. Above the building are three gold coins, and two blue arrows form a circular loop around the building, suggesting a cycle or flow. Below the graphic are two stacked rectangular boxes: a blue one labeled 'Public Money' and a green one labeled 'Public Code'. To the right of the graphic, there is a text block with a question and an answer. At the bottom right of the infographic is the website 'publiccode.eu'.

Why is software created using taxpayers' money not released as Free Software?

If it is public money, it should be public code as well.

publiccode.eu

Social Contract

Democratic guarantees code

- Open to collaboration
- Transparency, traceability, integrity
- Democratic quality guarantees
- Privacy and security

/Principles

Governance

Open community: participation

- Proposal of new features
- Bug reporting
- Documentation
- Language translation
- Community and research meetings

Decidim Free Software Association: decision-making

- Coordination Committee
- General Assembly

AI/ML related proposals on meta.decidim.org

← Back to list

Intelligent recommendations

DataForGoodBCN 30/06/2020 18:12

Evaluating When someone publishes a new proposal, a list of similar entries is displayed to avoid duplicates. The current recommendation algorithm calculates the similarity of each pair of proposals based on trigram (sets of 3-characters) comparison. This method, however, does not take into account the semantic aspects of the text and can be easily improved using simple Machine Learning techniques.

We suggest using a technique ca to each proposal a multi-dimens terms of semantics) end up havi for a given proposal would be the vectors.

To calculate the vectors associat calculated vector embeddings fo vocabulary) and then calculating The pre-calculation of word vect

17 ENDORSE

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Use automatic language detection for the machine translation feature

virgile Deville 10/06/2021 17:14

Is your feature request related to a problem? A clear and concise description of what the problem is.

The future.europa.eu platform is one of the first Decidim instances to be using the machine translation feature.

Based on the proposal "Machine tr detection edge cases" we'd like to language problem.

As described in the additional con UGC (User generated content) form it or take the time to select the rig

0 ENDORSE

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Aggregate the opinions issued in a debate

Maite López Sánchez 11/03/2022 07:08

The problem

Currently debates allow participants to post comments/arguments in favour or against a proposal, and they can also express if they agree or disagree with the arguments issued by others. However, this information is not aggregated, and thus, it can be difficult to asses the debate results (that is, if the proposal should be accepted or rejected).

The solution

It would be really useful to aggregate all the opinions issued in a debate so that the result becomes apparent. The attached images illustrate this idea (thumbs up/down are just to illustrate the idea, proper design would be required).

This aggregated opinion would help to increase the quality of the debate (an thus, of the democratic process it represents), and may incentivise participants to pose their opinions.

0 ENDORSE

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Reference: MDC-PROP-2022-03-18956
Version number 1 (of 1) see other versions
Check fingerprint
Share
Embed

DECIDIM FEST

18 - 20 oct.
2023
canòdrom
bcn

Democracy,
technology
and
artificial collective
intelligence



**Open
Call**



Ajuntament de
Barcelona



Thanks

Contact: paragon@wikimedia.org

DIGITAL
HUMANISM
SUMMIT



A.I.
AND
DEMOCRATIC
SUSTAINABILITY