Predicting Bias in English-Language Wikipedia Articles

Luke Dowker

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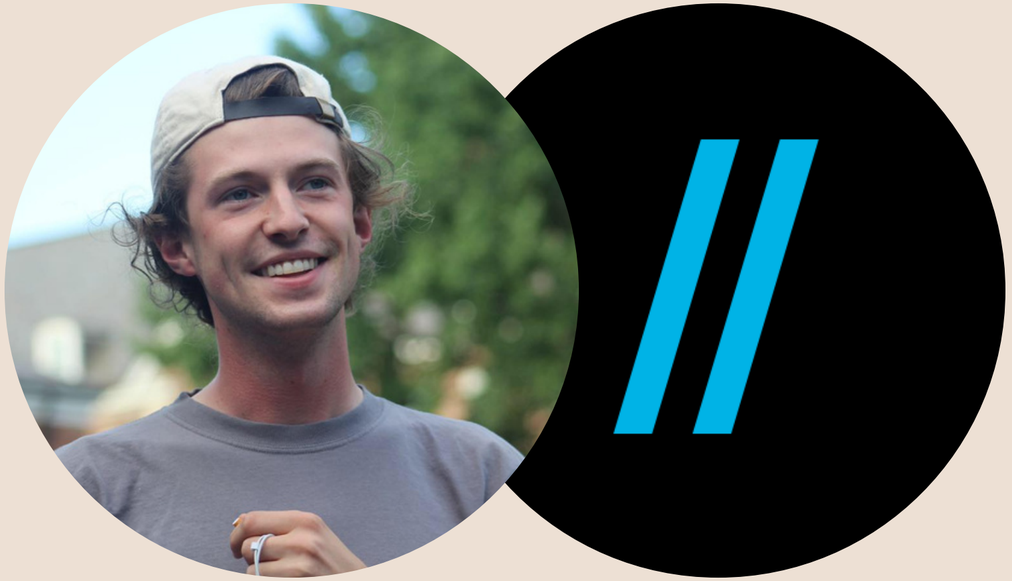
Project Supervisor



Luke Dowker

Data Scientist, Flatiron School

Agenda

01

Business Problem

02

Data & Methods

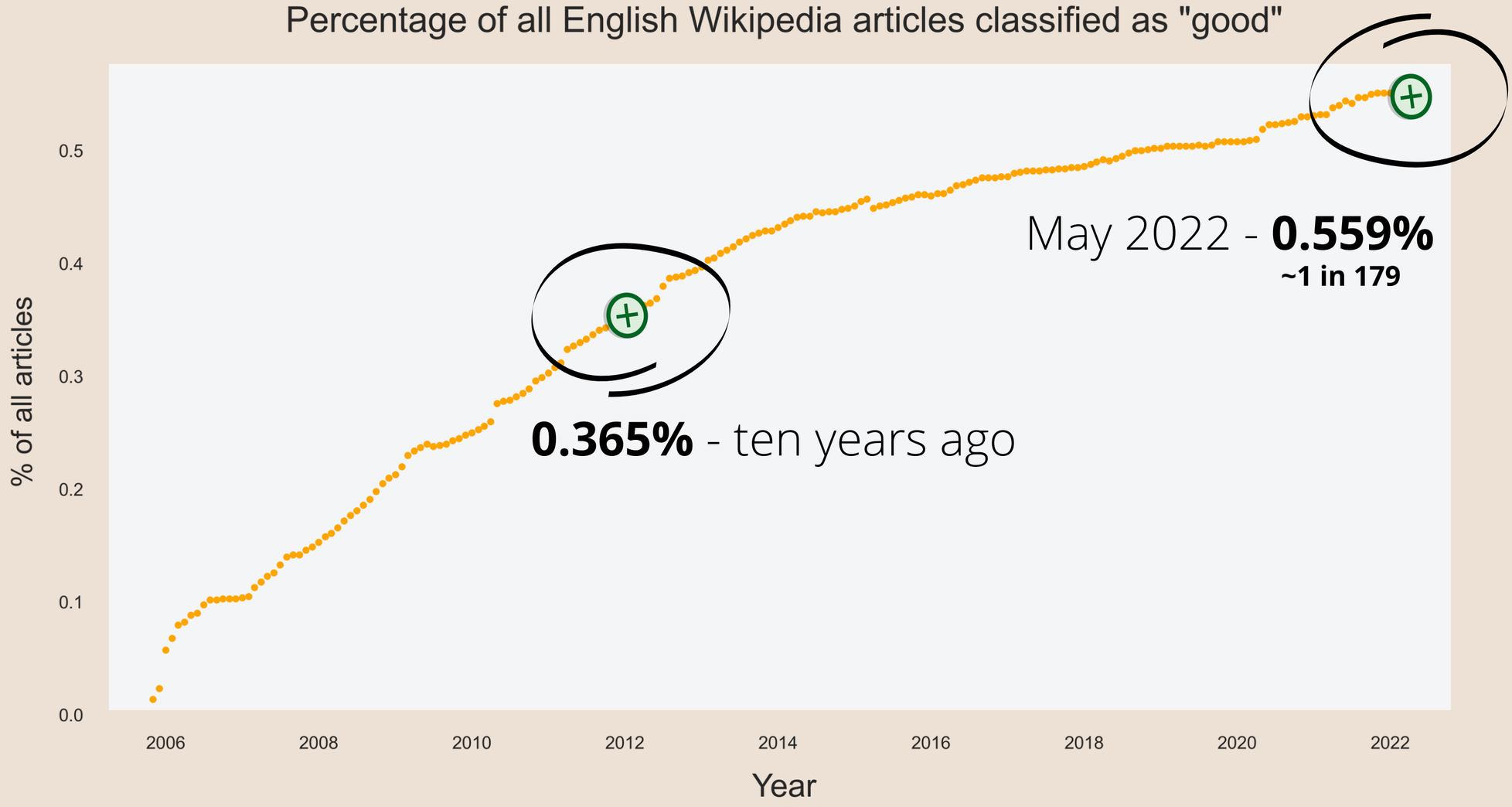
03

Results

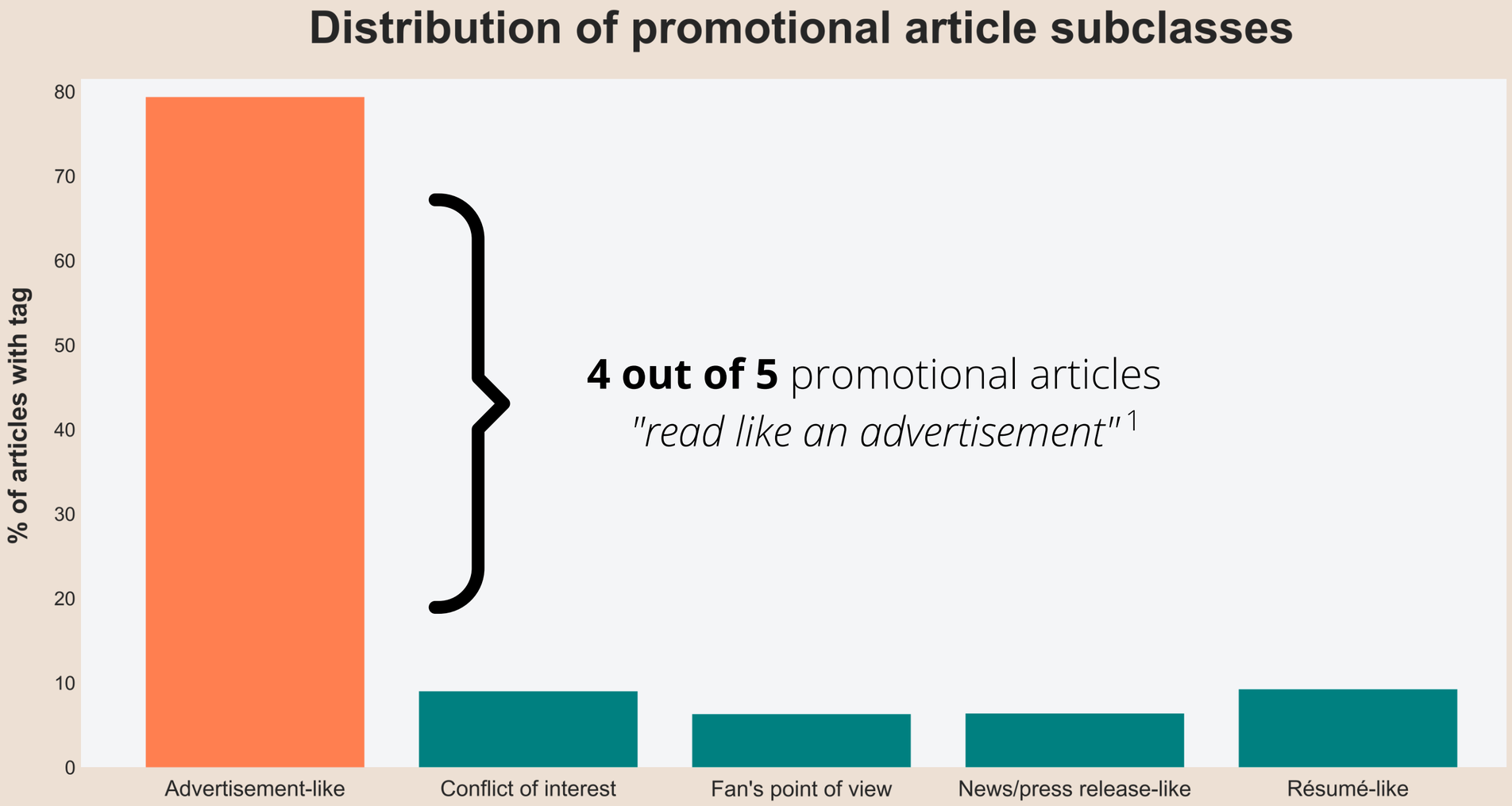
04

Conclusions & Next Steps

Article quality: On the up!



...but not *every* article

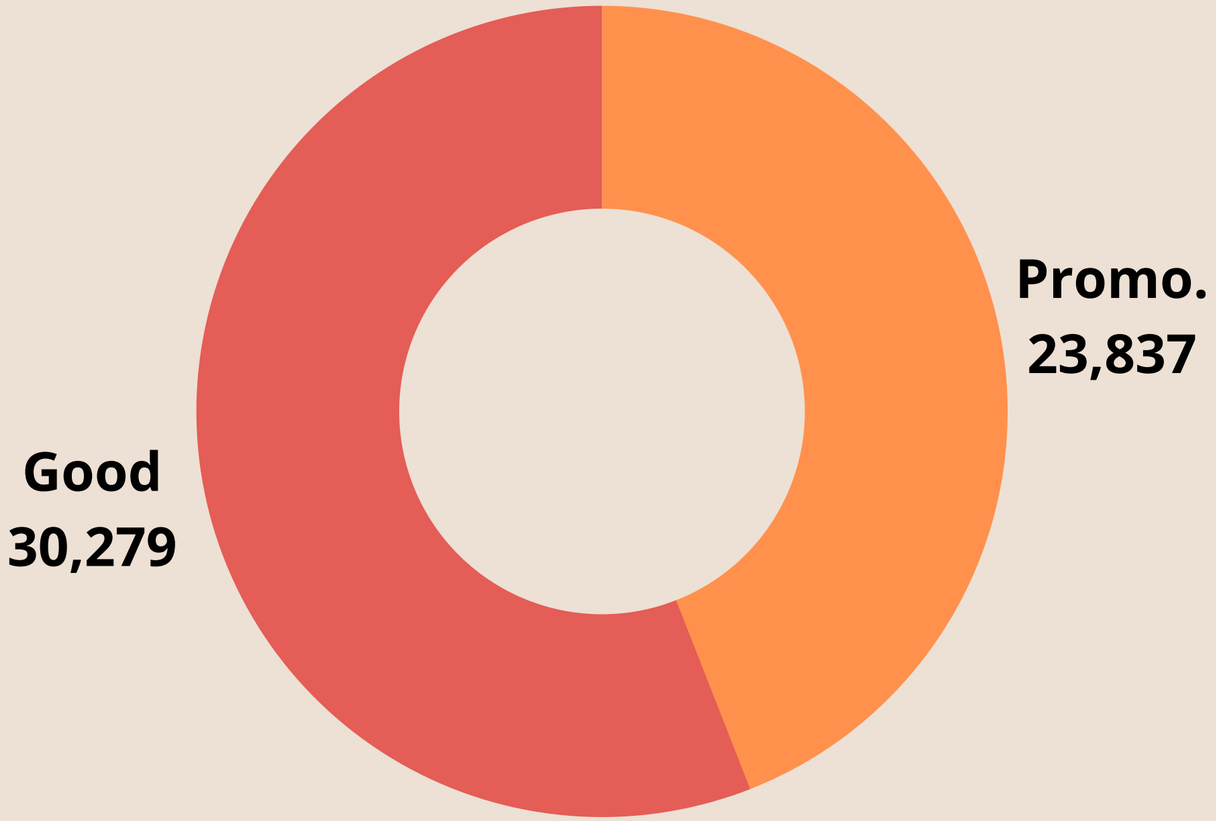


1. Some articles were marked as belonging to more than one subclass.

Process

Dataset

- Good articles slightly outnumber promotional ones
- Active edits = **evolving data!**
  - ~581 new articles daily[2]



2. Cited from Wikipedia's internal statistics page.

How it works:

INPUT

raw text, e.g.
Wikipedia article

OUTPUT

prediction: "good"
or "promotional"

Text data: Two approaches

Term count

CountVectorizer

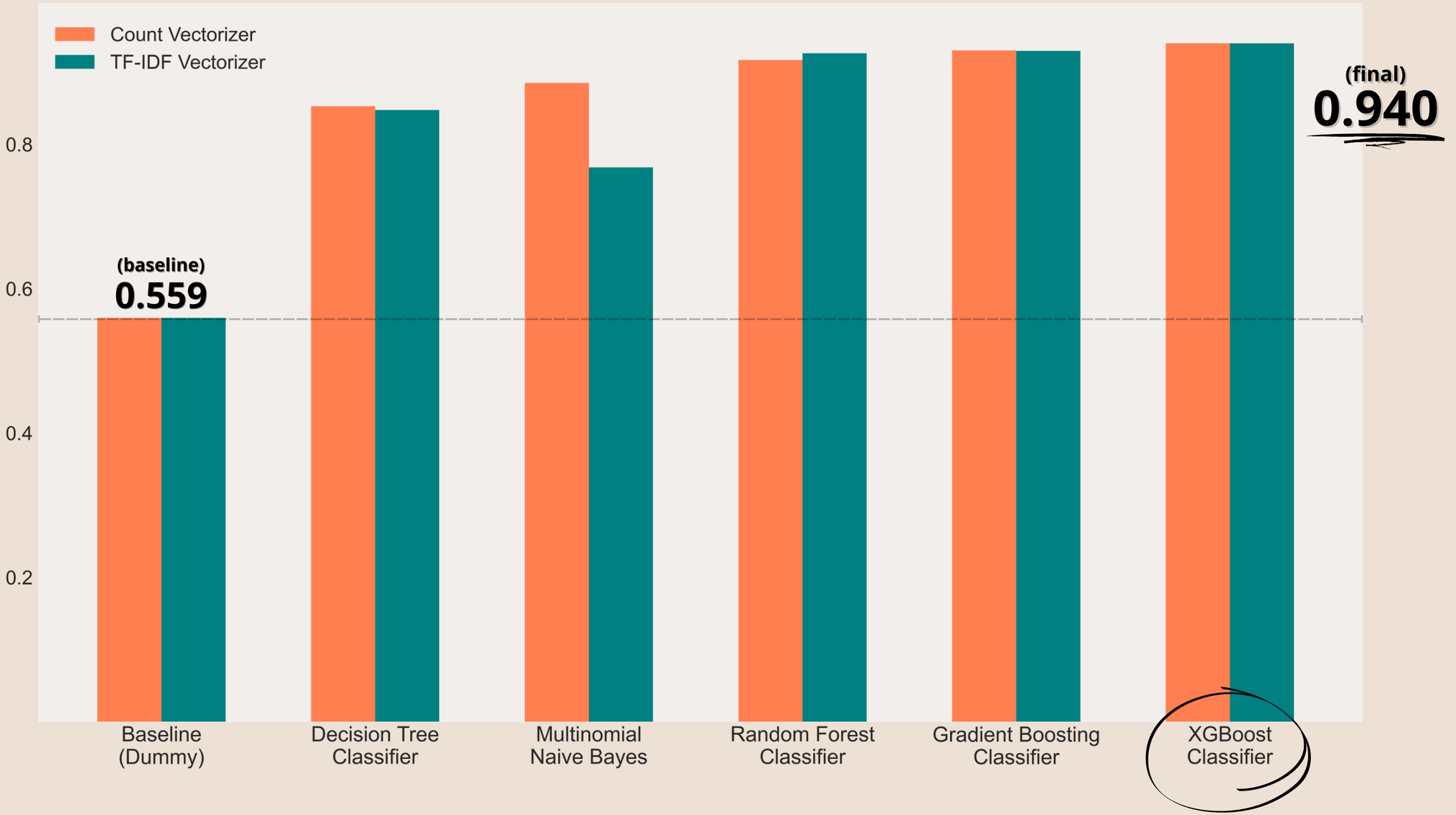
Frequency of terms is the sole metric used for predictions.

Term importance

TfidfVectorizer

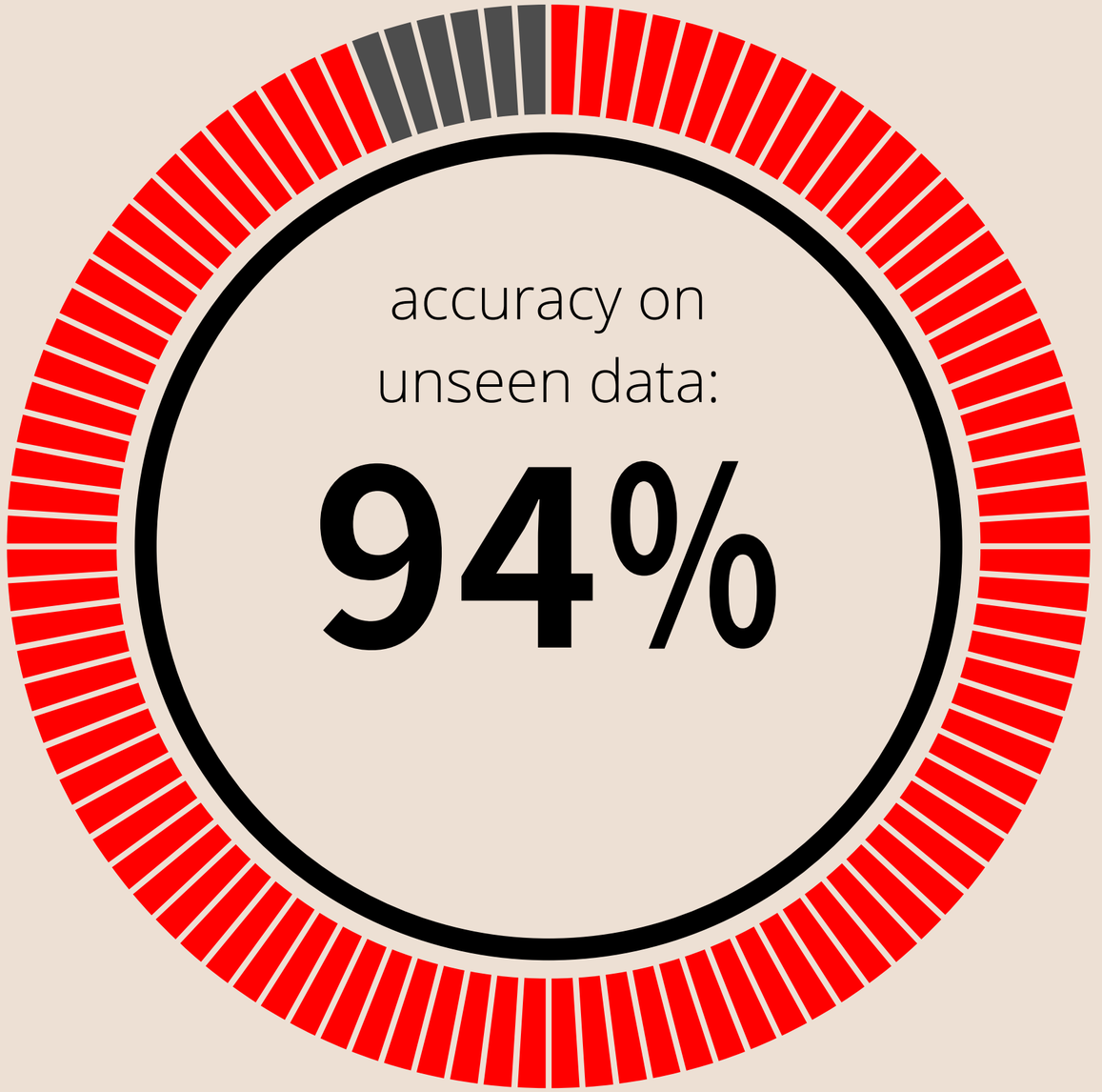
Calculates the **relative importance** of terms to make predictions.

Accuracy scores by algorithm[3]



3. Results of 5-fold cross-validation on twice-split data,. i.e. a validation test set.

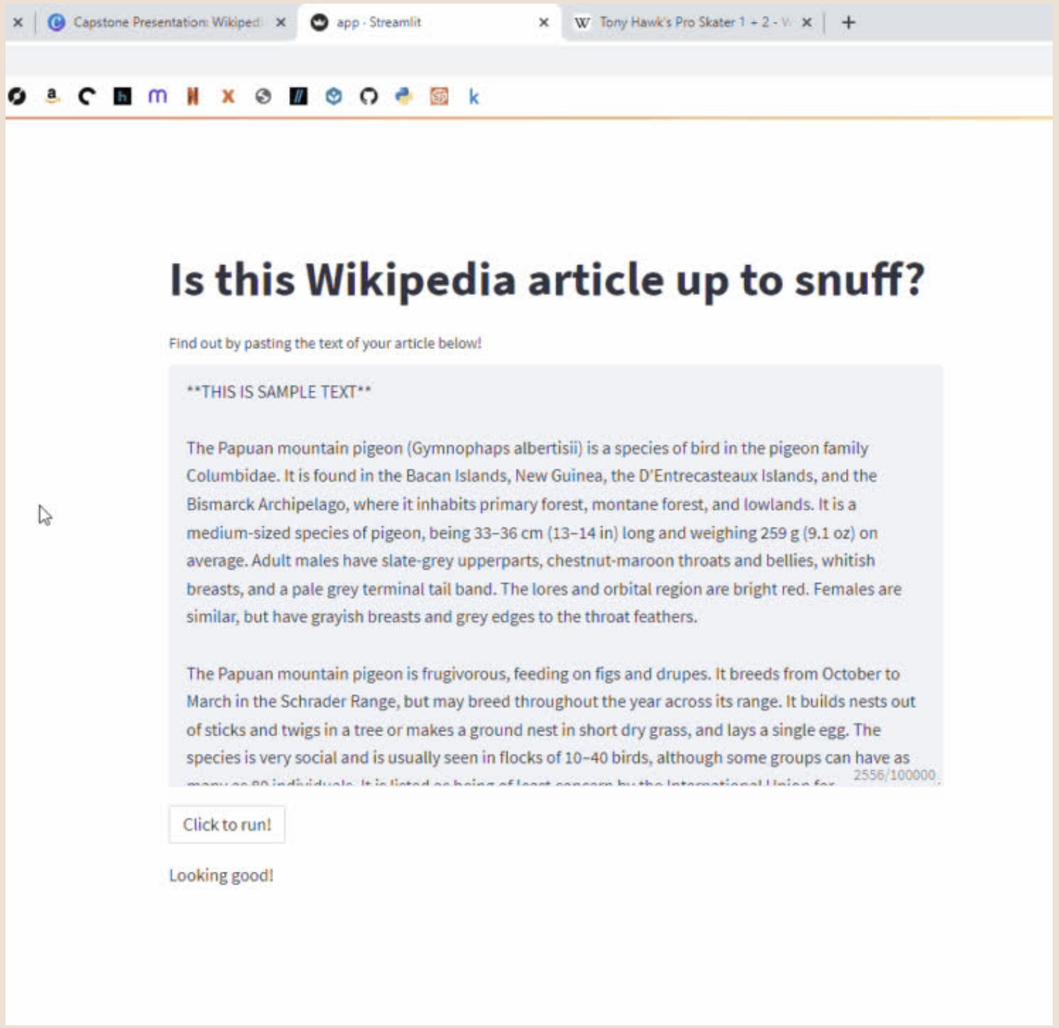
Performance



Recommendations for Action & Next Steps

What now?

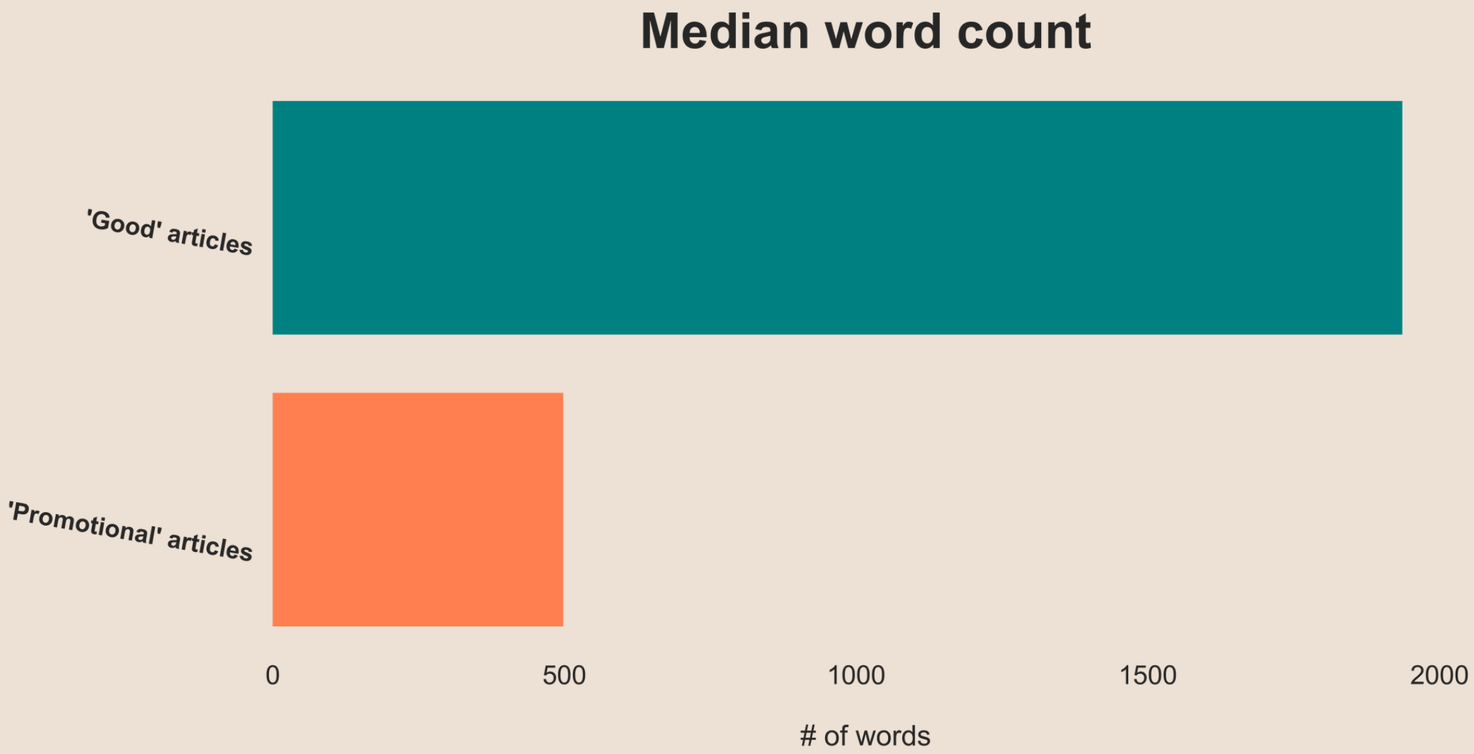
- Integrate **Streamlit app** into user interface
- **Pre-classify** newly published content



Future development

- Engineer **new features**
- Collaborate with **Fandom** wikis
- Word embedding & **neural networks**
- Create predictions from **URLs** using HTML

Fandom



Thank you!

Contact me:

 **lhdowker@gmail.com**

or on LinkedIn / GitHub