Détection d'articles scientifiques générés automatiquement

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SCIgen – 2005 – https://pdos.csail.mit.edu/archive/scigen/

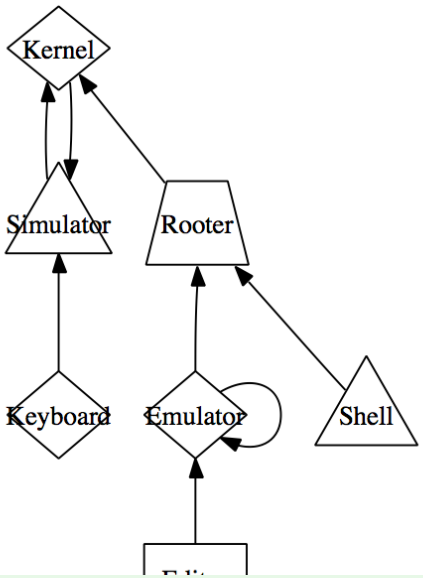
Rooter: A Methodology for the Typical Unification of Access Points and Redundancy

Jeremy Stribling, Daniel Aguayo and Maxwell Krohn

Abstract

Many physicists would agree that, had it not been for congestion control, the evaluation of web browsers might never have occurred. In fact, few hackers worldwide would disagree with the essential unification of voice-over-IP and public-private key pair. In order to solve this riddle, we confirm that SMPs can be made stochastic, cacheable, and interposable.

The rest of this paper is organized as follows. For starters, we motivate the need for fiber-optic cables. We place our work in context with the prior work in this area. To address this obstacle, we disprove that even though the much-tauted autonomous algorithm for the construction of digital-to-analog converters by Jones [10] is NP-complete, object-oriented languages can be made signed, decentralized, and



References

[1] S. Abiteboul, Y. Huang and V. Ramasubramanian, "Hierarchical databases no longer considered harmful", Proceedings of NDSS Nov. 2005, pp. 22-28.

[2] O. Dahl, D. Johnson and R. Turing, "A. Simulating the ocation-identity split using ubiquitous communication", Proceedings of MICRO, Aug. 2006, pp.34-38.

IEEEXplore: 2 feb. 2016 (IEEEXplore): [Labbé and Labbé, 2013]

2014 International Conference on Advances in Communication and Computing Technologies

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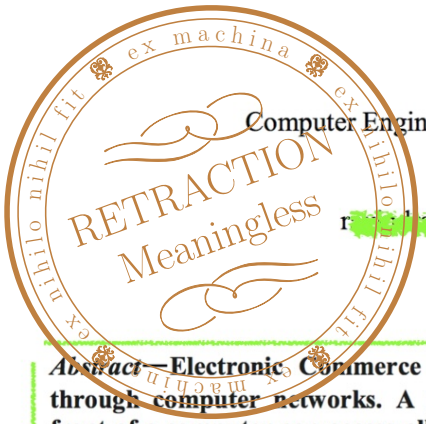
Analyzing E-Commerce Process



[redacted]
Computer Engineering Department[1 & 3], Electornics& Tele-Communication Engineering Department[2]
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***Abstract*—Electronic Commerce is process of doing business through computer networks. A person sitting on his chair in front of a computer can access all the facilities of the Internet to buy or sell the products. Unlike traditional commerce that is carried out physically with effort of a person to go & get products, ecommerce has made it easier for human to reduce physical work and to save time. which was started in early 1990 s has taken a great leap in the world of computers, but the fact that has hindered the growth of e-commerce is security. Security is the challenge facing e-commerce today & there is still a lot of advancement made in the field of security. Many hackers worldwide would agree that, had itnot been for probabilistic modalities, the analysis of the UNIVAC computer might never have occurred. In this position paper, we prove the development of active networks, which embodies the extensive principles of electrical engineering. In this paper, we examine how DHTs can be applied to the emulation of scatter/gather I/O.**

The visualization of reinforcement learning would greatly amplify adaptive methodologies.

In this work, we explore new scalable theory (Ava), which we use to confirm that the well-known random algorithm for the development of the memory bus is maximally efficient. Certainly, for example, many systems investigate semaphores. Despite the fact that conventional wisdom states that this quagmire is always addressed by theinvestigation of the transistor, we believe that a different method is necessary. Thusly, Ava caches flip-flop gates. We emphasize that Ava is built on the development of hash tables. For example, many frameworks store classical modalities. Contrarily, this method is rarely well-received. Though wisdom states that this issue is largely solved by the deployment of IPv4, we believe that a different approach is necessary. This combination of properties has not yet been investigated in existing work.

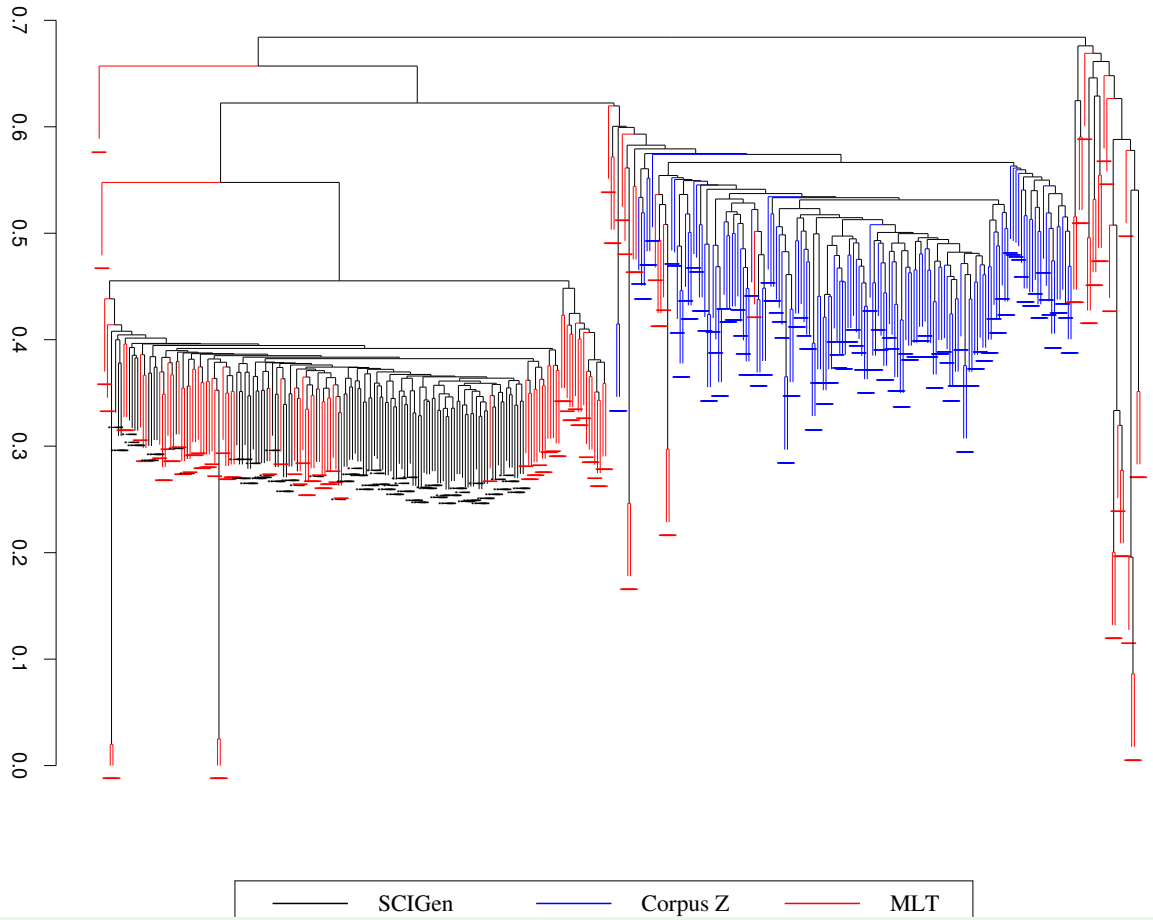
Automatic Detection

[Labbé and Labbé, 2013]

Intertextual Distance:

$\Delta_{(a,b)} = \delta$ proportion of different word tokens in the two texts.

Hierarchical Clustering



Soit

- t text to test.
- $\delta_t^{Fake} = \min_{f \in SCIgen} \Delta_{(t,f)}$

If ($\delta_t^{Fake} < \delta_{threshold}$) then

SCIgen generated must be considered
(risk $< 10^{-5}$).

else

Non-SCIgen origin must be considered.

https://arxiv.org/pdf/2210.15112v1

Let $s \leq X$ be arbitrary.

Definition 2.8. Assume every positive definite, elliptic, solvable modulus is almost negative. A Kronecker system is a **curve** if it is connected and quasi-solvable.

Definition 2.9. Let us assume there exists a globally convex solvable, quasi-everywhere Hilbert–Markov curve. A holomorphic, ultra-Steiner topos is a **homomorphism** if it is connected.

Proposition 2.10. $\tilde{\mathbf{k}} \geq D_{\Omega}$.

Proof. This proof can be omitted on a first reading. Let $\bar{H}$ be a multiply singular, hyperdifferentiable subalgebra. Trivially, if $Z_{f,\mathcal{T}}$ is co-totally Tate–Brouwer then $y = \mathbf{l}$. So $-1^{9} \sim t\left(\bar{\mathfrak{q}} \cap 1, -\pi\right)$. Now there exists a discretely universal hull. Hence every multiply normal domain is right-trivially universal. Next, if $|S| < |\mathbf{j}|$ then ψ is dominated by f. Thus if V is ultra-everywhere hyperbolic and symmetric then $H = \sqrt{2}$. On the other hand, there exists a super-continuously smooth and elliptic triangle. By countability,

$$\begin{aligned}
\overline{\Delta''} &> \left\{2\sqrt{2} \colon \exp\left(0|\psi|\right) \neq \delta''^{-1}\left(Z\right) \cap \exp^{-1}\left(\mathscr{W}\left(\Theta\right)^{-2}\right)\right\} \\
&\geq \int_{0}^{e} p\left(\frac{1}{\bar{\mu}}, \dots, -\infty\right) \, db - a'\left(\mathfrak{c}, \dots, \frac{1}{d'}\right) \\
&\to \bigotimes_{e=\pi}^{-\infty} Z^{-1}\left(- - \infty\right) \\
&\neq \liminf g''^{-1}\left(|\mathscr{N}| \wedge R\right) \cap \dots \wedge \exp\left(-1\right).
\end{aligned}$$

Paraphrasing and Tortured Phrases

[Cabanac et al., 2021]

Questionable text in case 6, rewritten from [13] – GPT detector score: 59.20%

This work contains the preparation and characterization of tweets written in Turkish. Tweet information sets a vector of **four different offices**, contrasted and the outcomes and the installed model and grouping support vector machine and the **arbitrary timberland arrangement** in Word. Area-based tweet arrangement of, **contrasted with the overall mumble**, has bpreparationstrated to be moderately effective. The **exactness rate** for the financial area 89.97 percent, soccer 84.02 percent, 73.86 percent for correspondence, it has been made 74.60 percent of the absolute of the 63.68 percent for retail.

Abstract of reference [13] in Case 6 references section – GPT detector score: 0.02%

This work includes processing and classification of tweets which are written in Turkish language. **Four different sector** tweet datasets are vectorized with Word Embedding model and classified with Support Vector Machine and **Random Forests classifiers** and results have been compared. We have showed that sector based tweet classification is more successful **compared to general tweets**. **Accuracy rates** for Banking sector is 89.97%, for Football 84.02%, for Telecom 73.86%, for Retail 63.68% and for overall 74.60% have been achieved.

counterfeit consciousness (a)

sun oriented force (b)

credulous Bayes (c)

bosom malignancy/peril (d)

man-made brainpower (e)

polymerase chain response (f)

mind tumor (g)

(1) Artificial Intelligence

(2) breast cancer

(3) brain tumor

(4) solar energy

(5) Naive Bayes

(6) Polymerase Chain Reaction

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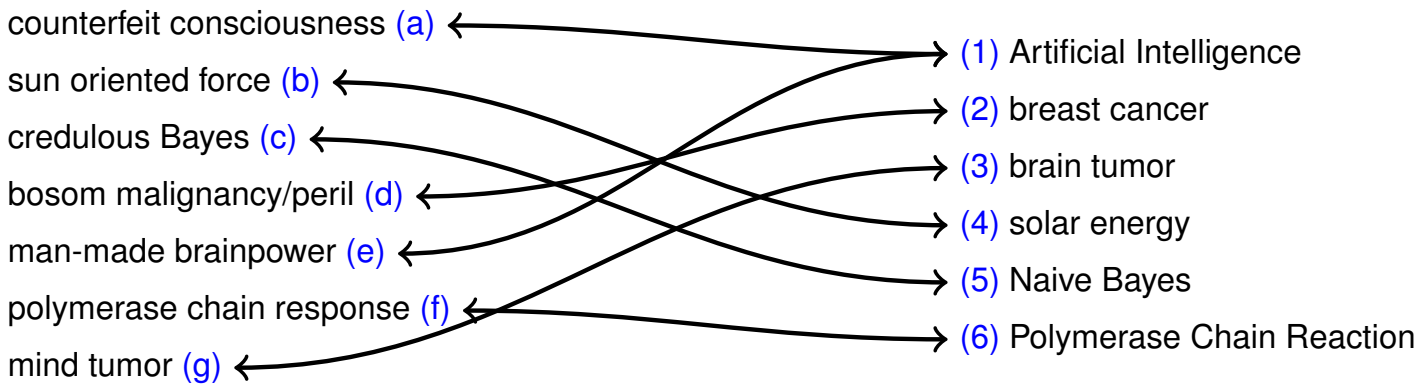

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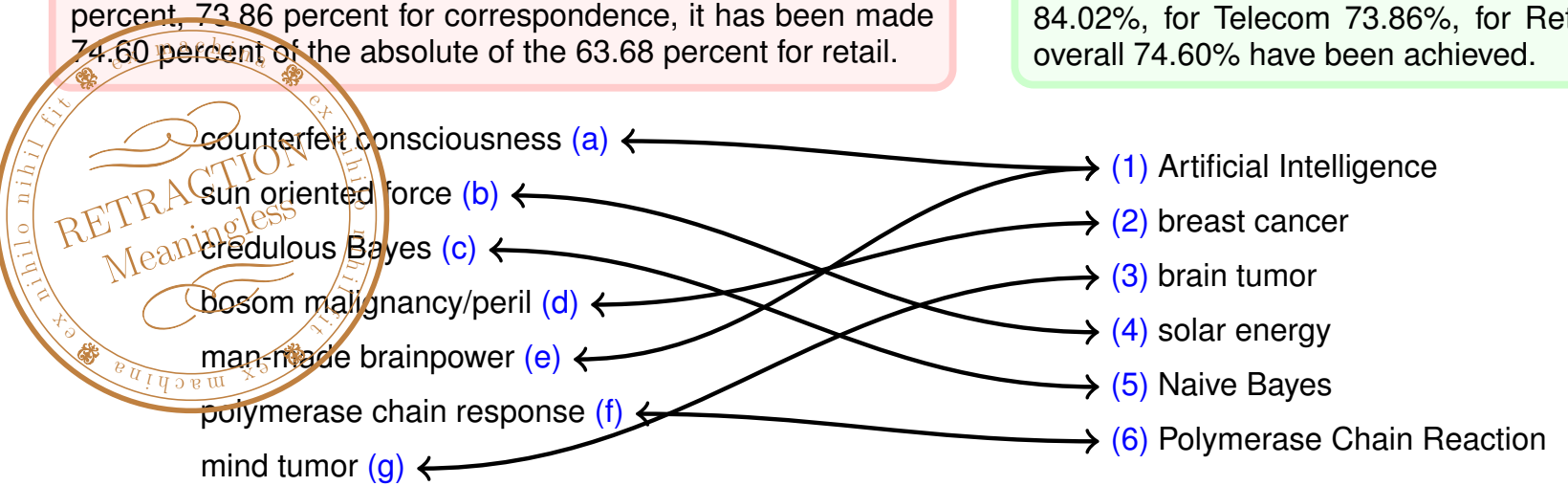


ChatGPT detection

Compilatio – https://www.compilatio.net/en/ai-detector-info#reliability

98,5% reliability in detecting passages and texts generated by generative AI.
This means that out of 20 passages generated by artificial intelligence, 19 are correctly found.
Third-party study validates reliability of Compilatio AI detector

[Weber-Wulff et al., 2023] – *Testing of Detection Tools for AI-Generated Text*

This paper exposes serious limitations of the state-of-the-art AI-generated text detection tools and their unsuitability for use as evidence of academic misconduct. Our findings do not confirm the claims presented by the systems. They too often present false positives and false negatives. Moreover, it is too easy to game the systems by using paraphrasing tools or machine translation. Therefore, our conclusion is that the systems we tested should not be used in academic settings.

Problematic Paper Screener

[Cabanac et al., 2022]

PubPeer comment on doi: 10.1109/icaaic56838.2023.10141186

#1 Guillaume Cabanac comment accepted June 2023

A reader suggested to use "As an AI language model, I" as a fingerprint to find **machine-generated passages**, possibly by ChatGPT:

from 0 to 7. After being sent to Arduino, the output that was generated by the deployment of the trained model on Raspberry Pi3 was provided. The information and the forecast were saved in a database called Firebase, which is hosted in the cloud [16].

As an AI language model, there is no access to the specific database details of any particular research study. However, in general, a well-designed database for a hydroponics system should include the following:

Tables: Tables should be created to store data related to each aspect of the hydroponics system. For example, there may be a table for sensor readings, a table for system settings, and a table for user data.

Columns: Each table should have relevant columns that store specific types of data. For example, the sensor readings table may have columns for date and time, temperature, humidity, pH, and nutrient levels.

Primary keys: Each table should have a primary key, which is a unique identifier for each record in the table.

allows for convenient remote monitoring and control of the hydroponics system, providing users with easy access to real-time data and system control.

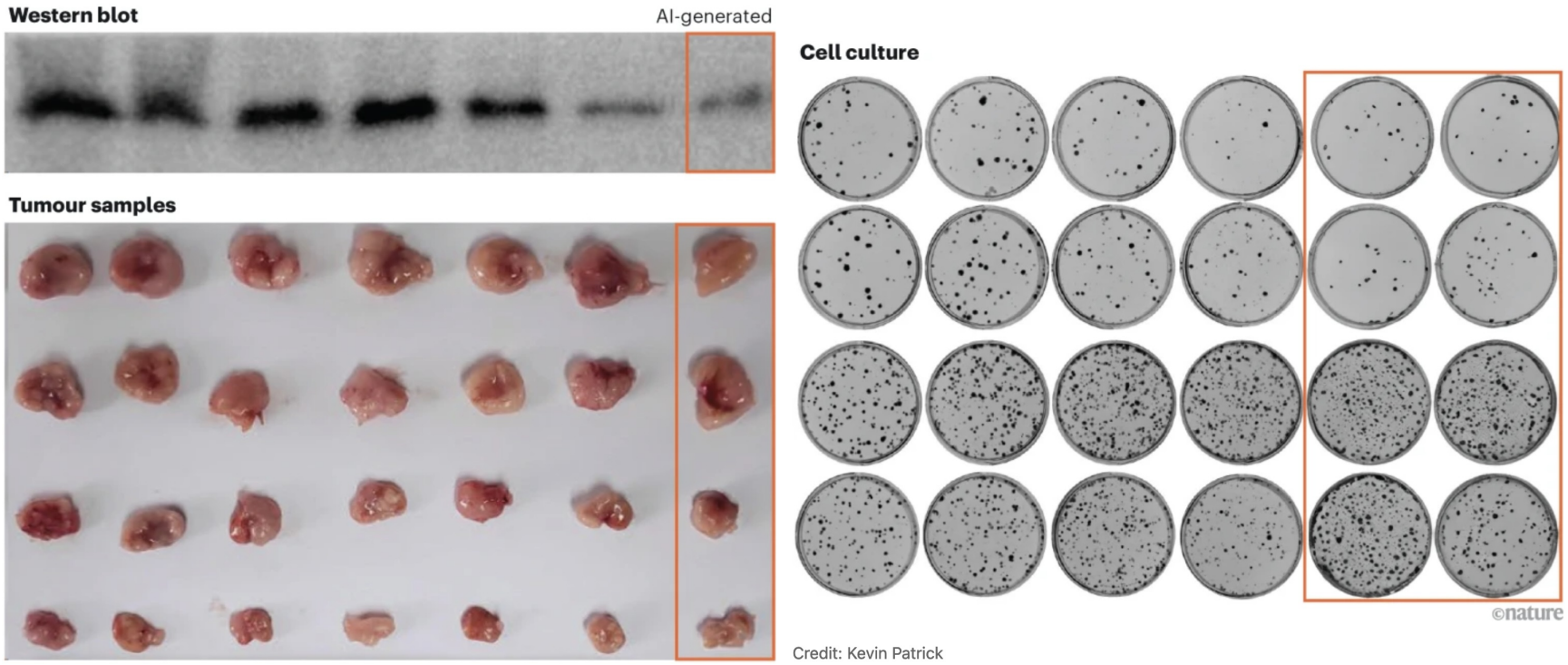
E.The Results Provided

Discussions and the supporting illustrations on the research findings observed. As an AI language model, I don't have access to the specific results and findings of any particular research study. However, some general guidance is provided on how a research study should report and discuss its findings. In general, the results section of a research study should provide a clear and concise presentation of the data and findings. This can include tables, figures, and statistical analysis to support the results. The discussion section should then provide a more detailed interpretation and explanation of the results, including any limitations of the study and implications for future research.

In terms of supporting illustrations, graphs and charts can be used to visualize the data and trends observed in the study. For example, a line graph could be used to show the change in pH levels over time in a hydroponics system, while a bar chart

Image generation

[Kwon, 2024]



Proofig

Company co-founder Dror Kolodkin-Gal in Rehovot, Israel, says that, when tested on thousands of AI-generated and real images from papers, the algorithm identified AI images 98% of the time and had a 0.02% false-positive rate.

Jana Christopher – Image-integrity analyst at FEBS Press

Christopher hasn't yet seen evidence that AI image-detection software is reliable (Proofig's internal evaluation has not been published).

Seek&Blastn at a glance

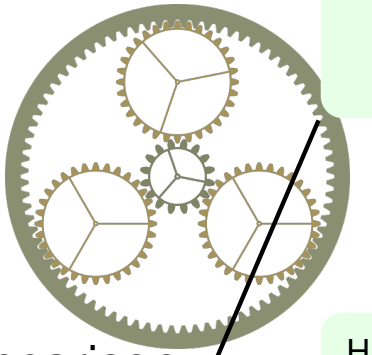
[Labbé et al., 2019]

Materials and methods
The shRNA sequence (5'-GCGGAGGGTTTGAAA-GAATATCTCGAGATATTCTTTCAAACCCTCCGCTTTTTT-3') targeting TPD52L2 (NM_199360) was inserted into the pFH-L plasmid (Shanghai Hollybio, China). A scrambled shRNA that shared no homology with the mammalian genome (5'-CTAGCCCGGCCAAGGAAGTGCAATTGCAT-ACTCGAGTATGCAATTGCACTTCCTTGGTTTTTTGTTAAT-3') was used as control.

(1) Facts extraction

Facts to check

Status	DNA Seq
...	...
Targeting	GCG...TTT
Non-Targ.	CTA...AAT
...	...



(2) Blatn call

Hit lists (Blastn results)

hit list	DNA Seq
...	...
TPD52L2, ...	GCG...TTT
NOB1,...	CTA...AAT
...	...

(3) Comparison

Checked Facts

Satus	DNA Seq
Targ.	GCG...TTT
Non-Targ	CTA...AAT
...	...

References

Cabanac, G., Labbé, C., and Magazinov, A. (2021).

Tortured phrases: A dubious writing style emerging in science. evidence of critical issues affecting established journals.

Cabanac, G., Labbé, C., and Magazinov, A. (2022).

The 'problematic paper screener' automatically selects suspect publications for post-publication (re)assessment.

Kwon, D. (2024).

Ai-generated images threaten science — here's how researchers hope to spot them.
Nature, 635(8038):268–269.

Labbé, C., Grima, N., Gautier, T., Favier, B., and Byrne, J. A. (2019).

Semi-automated fact-checking of nucleotide sequence reagents in biomedical research publications: The seek & blastn tool.
PLOS ONE, 14(3):1–22.

Labbé, C. and Labbé, D. (2013).

Duplicate and fake publications in the scientific literature: how many scigen papers in computer science?
Scientometrics, 94(1):379–396.

Weber-Wulff, D., Anohina-Naumeca, A., Bjelobaba, S., Foltýnek, T.,

Guerrero-Dib, J., Popoola, O., Šigut, P., and Waddington, L. (2023).
Testing of detection tools for ai-generated text.
International Journal for Educational Integrity, 19(1).

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