

Reviewing in
NLP – A
Tutorial

Kevin
Bretonnel
Cohen, Karën
Fort, Margot
Mieskes,
Aurélie
Névéol, Anna
Rogers

Introduction

Background

The Actual
Review

Reviewing a
specific
section

Ethics and
reviewing
the process
the content



Reviewing in NLP – A Tutorial

Kevin Bretonnel Cohen, Karën Fort, Margot Mieskes,
Aurélie Névéol, Anna Rogers

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Overview

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- the process
- the content

Who am I?

Aurélie Névéol (she/her), researcher at LISN CNRS in France

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- Expertise in biomedical natural language processing
- Reviewing approach: "Come with an open mind"
- Biases:
 - Strong preference for IMRaD structured papers
 - Interest in languages other than English
 - ...

Ethics of reviewing

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A two way street:

- ① Provide fair, balanced, ethical reviews
- ② Hold authors accountable for their research

Research reporting considerations

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- Check for (self-)plagiarism
- Check for salami slicing
- Check for reproducibility material (FAIR principles)
 - Is it available as advertised?
 - Is it documented?
 - Is it usable?

Wilkinson M, Dumontier M, Aalbersberg I et al. The FAIR Guiding Principles for scientific data management and stewardship. Sci Data 3, 160018 (2016).

Research reporting considerations

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- ACL abides by the ACM code of ethics
<https://www.acm.org/code-of-ethics/>
- Additional guidelines were prepared for recent *ACL conference ethics committees

Bender E and Fort K [Ethics Review Questions](#).

NAACL (2021). <https://2021.naacl.org/ethics/review-questions/>

Schofield X. [Ethical Review for ACL Papers](#).

ACL-IJCNLP (2021) <https://vimeo.com/user106613660>

The ethics review committee

...is different from the *scientific* review committee

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- Ensures that ethical considerations are adequately addressed
- Supports the authors' ethical approach to research
 - Conduct
 - Reporting
 - Impact
- Issues recommendations to the conference chairs that can impact acceptance

Topics in NLP research ethics

Datasets

- Provenance and availability
 - Terms of use, including confidentiality, copyrights
 - Some information is *always* sensitive (e.g. health, religion)
- Detailed description
 - Language
 - Volume
 - Selection and collection method
- Quality assessment, including biases

Bender E and Friedman B [Data Statements for NLP: Toward Mitigating System Bias and Enabling Better Science](#). *Transactions of the Association for Computational Linguistics* 6:587–604. (2018).

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Topics in NLP research ethics

NLP applications

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- Biases
- Misuse potential
- Potential harm to vulnerable populations

Char DS, Shah NH, Magnus D. [Implementing Machine Learning in Health Care – Addressing Ethical Challenges](#). New England Journal of Medicine. 2018;378(11):981–983.

Topics in NLP research ethics

Human subjects

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- Ethics committee approval
- Privacy, Potential harm, including essentializing identity characteristics
- Fair treatment of research participants

Larson B. *Gender as a Variable in Natural-Language Processing: Ethical Considerations.* Proc. ACL Workshop on Ethics in Natural Language Processing 1–11. (2017).

Fort K, Adda G, Cohen KB. *Amazon Mechanical Turk: Gold Mine or Coal Mine?* Computational Linguistics, 37(2):413–420 (2011).

Topics in NLP research ethics

Environmental impact

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- Reporting of computational resource use
 - Experiment impact tracker [https://github.com/
Breakend/experiment-impact-tracker](https://github.com/Breakend/experiment-impact-tracker)
 - Green Algorithms <http://www.green-algorithms.org/>
- Benefit/risk analysis beyond leaderboard performance

Ethayarajh K and Jurafsky D [Utility is in the Eye
of the User: A Critique of NLP Leaderboards.](#) Proc.
Conference on Empirical Methods in Natural Language
Processing (EMNLP) 4846–53. (2020).

Thank you for your interest in reviewing

We would love to hear from you!

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