

CHRISTINE DE KOCK, PHD

I am an NLP researcher and lecturer at Melbourne University. I am currently working on topics related to **extremism** and **disinformation** and lecturing in **machine learning**. I have worked on machine learning problems in a variety of domains, including recommender systems, radio frequency signal detection, fraud detection, and targeted advertising.

EDUCATION

2019 - 2023	<p>PHD IN COMPUTER SCIENCE The University of Cambridge Cambridge, UK THESIS: "Constructive online disagreements" <i>See publications below</i></p> <p>FUNDING:</p> <ul style="list-style-type: none">• The Oppenheimer Memorial Trust scholarship for international postgraduate study (£20 000).• Recipient of the Huawei Dialogue Studentship (£110 000).• Cambridge Language Sciences Incubator Fund 2021 (£2500).
2016 - 2017	<p>MASTER OF SCIENCE IN ARTIFICIAL INTELLIGENCE, <i>cum laude</i> The University of Edinburgh Edinburgh, UK THESIS: "Personalised news recommendation in the Afrikaans language" (78%)</p> <p>FUNDING:</p> <ul style="list-style-type: none">• The Oppenheimer Memorial Trust scholarship for international postgraduate study (£20 000).• Industrial funding from Naspers Ltd (£30 000). <p>AWARDS:</p> <ul style="list-style-type: none">• The Claire Jones Award for the top performing female student in Informatics (2017).
2012 - 2015	<p>BACHELOR OF ENGINEERING IN INDUSTRIAL ENGINEERING Stellenbosch University Stellenbosch, South Africa THESIS: "Data mining for print media advertising" (90%) HONOURS AVERAGE: 78%</p> <p>AWARDS:</p> <ul style="list-style-type: none">• Rector's Award for Excellent Achievement in Leadership (2014).• Lecturers' Award for Industrial Engineering Ambassador (2015).• Runner up: Best final year project in Industrial Engineering (2015).• Golden Key Honour Society (top 15% per field of study, 2013). <p>CO-CURRICULAR: Editor-in-chief of Die Matie Student Newspaper (2013-2014). Engineering Student Council. Academic Affairs Council.</p>
DEC 2011	<p>NATIONAL SENIOR CERTIFICATE Diamantveld High School Kimberley, South Africa AVERAGE: 93%</p> <p>AWARDS:</p> <ul style="list-style-type: none">• Overall top student in the Northern Cape Province (2011)• Top student in English in the Northern Cape Province (2011).

WORK EXPERIENCE

JUNE 2023- CURR	<p>Associate lecturer and research fellow University of Melbourne <i>Research and teaching in machine learning.</i> Funding: Hallmark Research Initiative (\$500 000), MMT Initiative (\$12 000), Google Faculty Credits (\$10 000).</p>
JULY 2022 - OCT 2022	<p>Research Intern Twitter Inc, London and San Francisco <i>Offline evaluation of a transformer-based recommender system.</i> Languages / technologies: Python, SQL, GCP, Docker</p>

JAN 2021 - APRIL 2021	Research Intern Wikimedia Foundation <i>Proposed and executed a project on the effects of collaboration patterns on article quality.</i> Languages / technologies: Python, Spark, SQL
DEC 2018 - MAY 2019	Science volunteer in Antarctica South African National Space Agency <i>I participated in two expeditions to South African stations in the Antarctic region: SANAE IV on the Antarctic continent, and Marion Island in the Southern Ocean. Our team performed upgrades to space weather monitoring instruments.</i>
SEPT 2017 - SEPT 2019	Data Scientist Media24 (a subsidiary of Naspers), South Africa <i>Worked with a team of developers to productionise the news recommendation approach developed in my Masters dissertation, and other R&D projects.</i> Artificial Intelligence Specialist Naspers Ltd, Amsterdam <i>Machine learning solution for detecting fraud in online classified ads for a major international classifieds company.</i> Awards: Included in the Mail & Guardian's 200 Young South Africans (2018). Languages / technologies: Python, SQL, R, GCP, AWS
JAN 2016 - SEP 2016	Junior Data Scientist The Square Kilometre Array, South Africa <i>Pulsar detection using neural networks.</i> Languages / technologies: Python, R, MatLab, limited C++

PUBLICATIONS

Full list of publications (including collaborations) are available on Google Scholar. First author publications are listed below.

1. *I Beg to Differ: A study of constructive disagreement in online conversation*
Christine De Kock and Andreas Vlachos.
Proceedings of EACL 2021. Kyiv, Ukraine.
2. *Survival text regression for time-to-event prediction in conversations*
Christine De Kock and Andreas Vlachos.
Findings of ACL 2021. Bangkok, Thailand.
3. *Leveraging Wikipedia article evolution for promotional tone detection*
Christine De Kock and Andreas Vlachos.
Proceedings of ACL 2022. Dublin, Ireland.
4. *How to disagree well: Investigating the dispute tactics used on Wikipedia*
Christine De Kock, Tom Stafford and Andreas Vlachos.
Proceedings of EMNLP 2022. Abu Dhabi, UAE.
5. *Investigating radicalisation indicators in online extremist communities*
Christine De Kock and Eduard Hovy.
Workshop for Online Abuse and Harms at NAACL 2024. Mexico City, Mexico.
6. *Jointly modelling the evolution of community structure and language in online extremist groups*
Christine de Kock.
arXiv:2409.19243
7. *LISTN: Lexicon Induction with Socio-Temporal Nuance*
Christine de Kock.
arXiv:2409.19257