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# Foundational and Applied Natural Language Processing (NLP)



**Dr. Aditya Joshi** (he/him)

Lecturer,

School of Computer Science and Engineering,  
UNSW Sydney

UNSW AI Symposium 2024  
Organized by UNSW AI Institute



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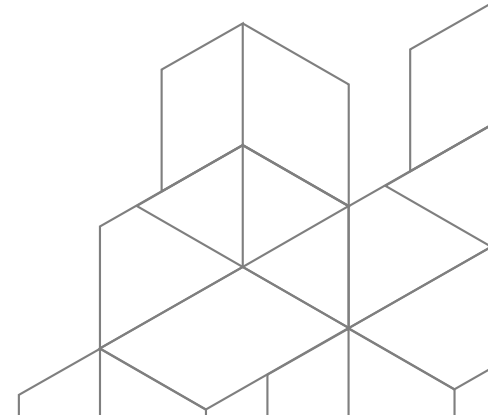
NLP → Large Language Models (LLMs)

UNSW AI Symposium 2024  
Organized by UNSW AI Institute

ACL, EMNLP, AAAI: CORE Ranking: A\*  
ACM RecSys: CORE Ranking: A  
ACM CSUR, PLoS One: Q1

# My journey in NLP so far

2011



ACL, EMNLP, AACL: CORE Ranking: A\*  
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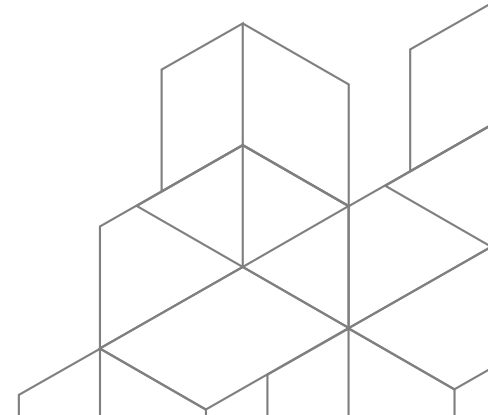
2011



## Masters Dissertation

Sentiment  
Classification

EMNLP 2011, ACL  
2011, etc.



ACL, EMNLP, AACL: CORE Ranking: A\*  
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# My journey in NLP so far



MONASH  
University

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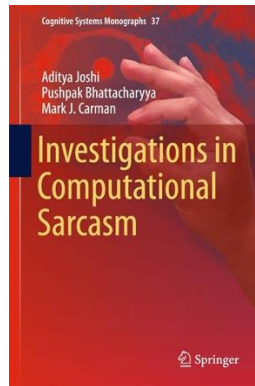
2013

PhD Thesis

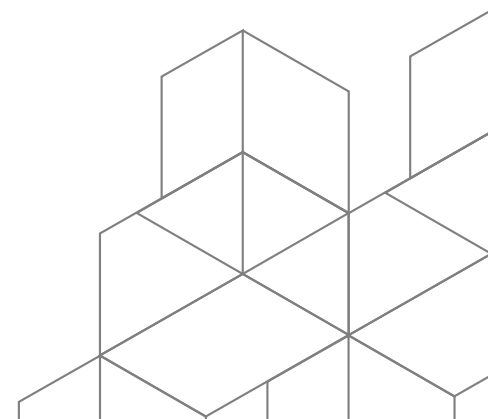
Masters Dissertation

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2018, ACM CSUR,  
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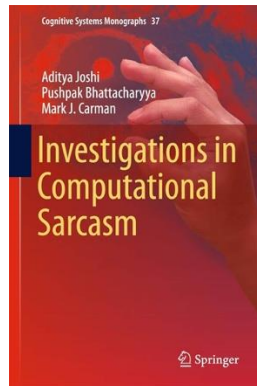
2018

2020

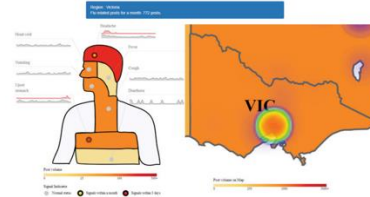
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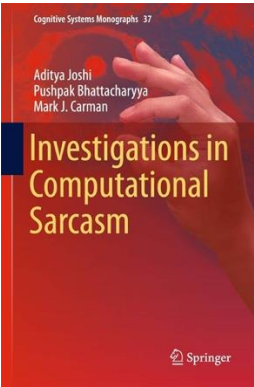
2020

2023

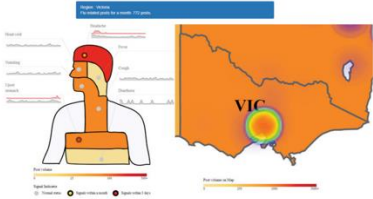
## Masters Dissertation

Sentiment Classification

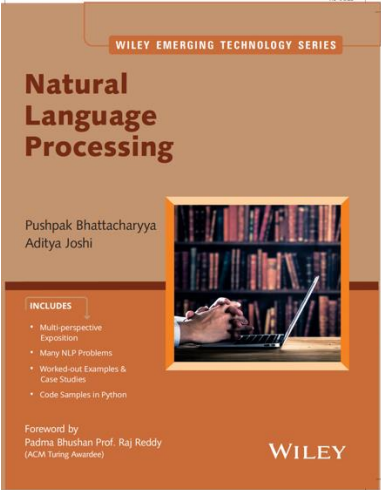
EMNLP 2011, ACL 2011, etc.



ACL 2014/2015, EMNLP 2016, AAAI 2018, ACM CSUR, etc.



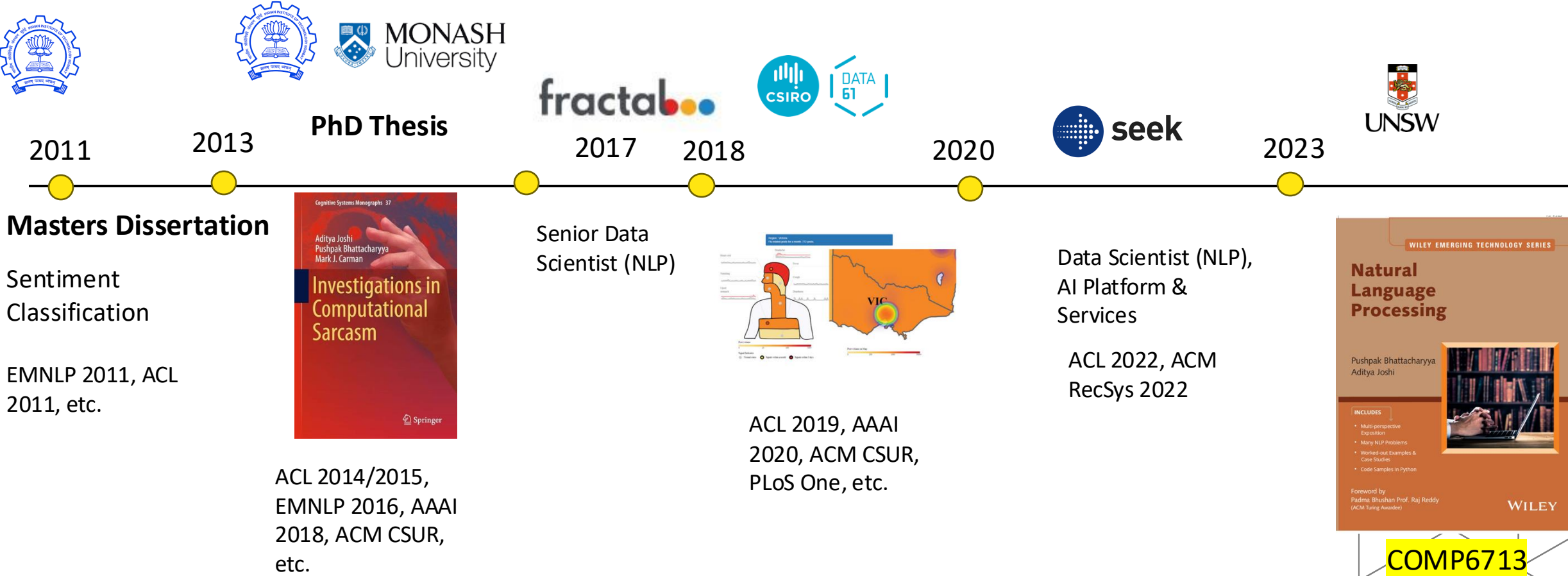
ACL 2019, AAAI 2020, ACM CSUR, PLoS One, etc.



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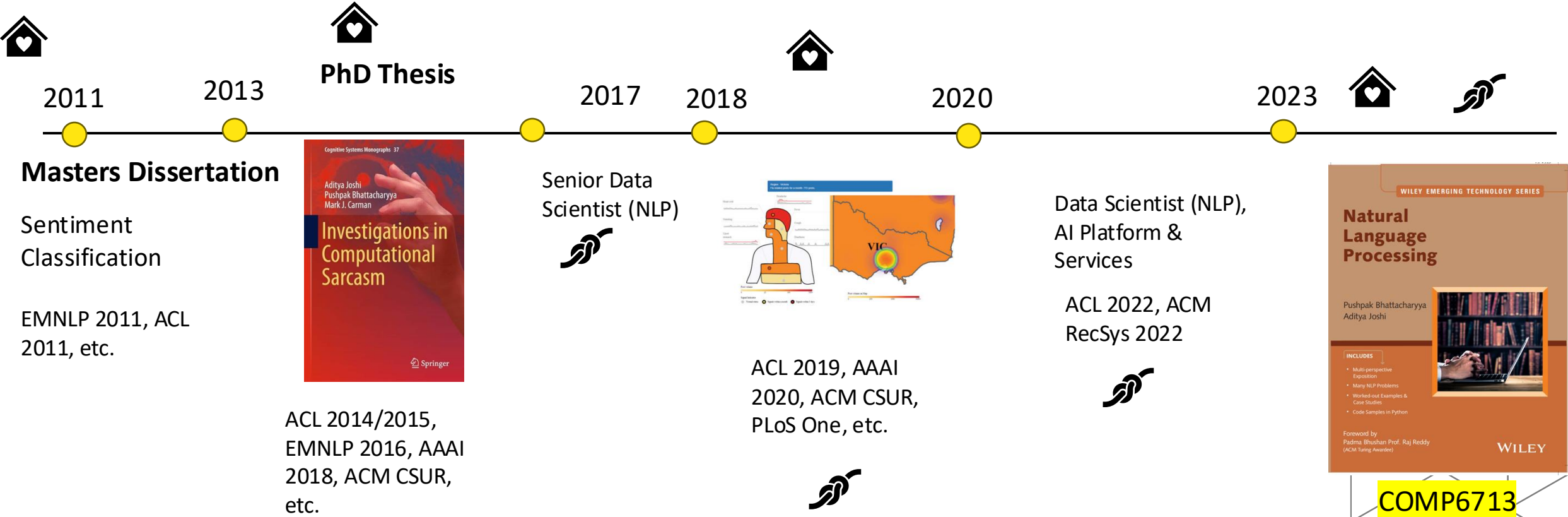
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# My journey in NLP so far



# Current Research in NLP

\*includes HDR students.

**Applied NLP**

**Foundational NLP**

# Current Research in NLP

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## Applied NLP

### Foundational NLP

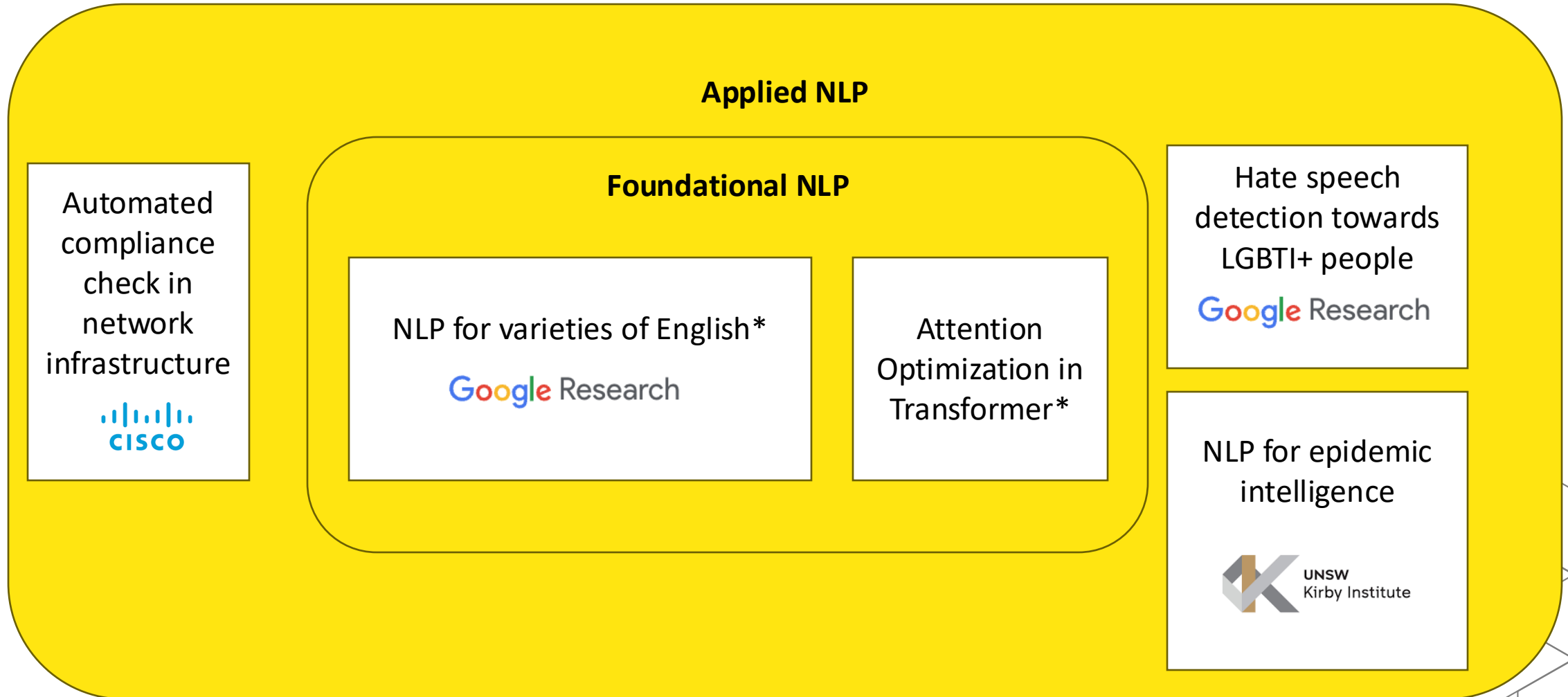
NLP for varieties of English\*

Google Research

Attention  
Optimization in  
Transformer\*

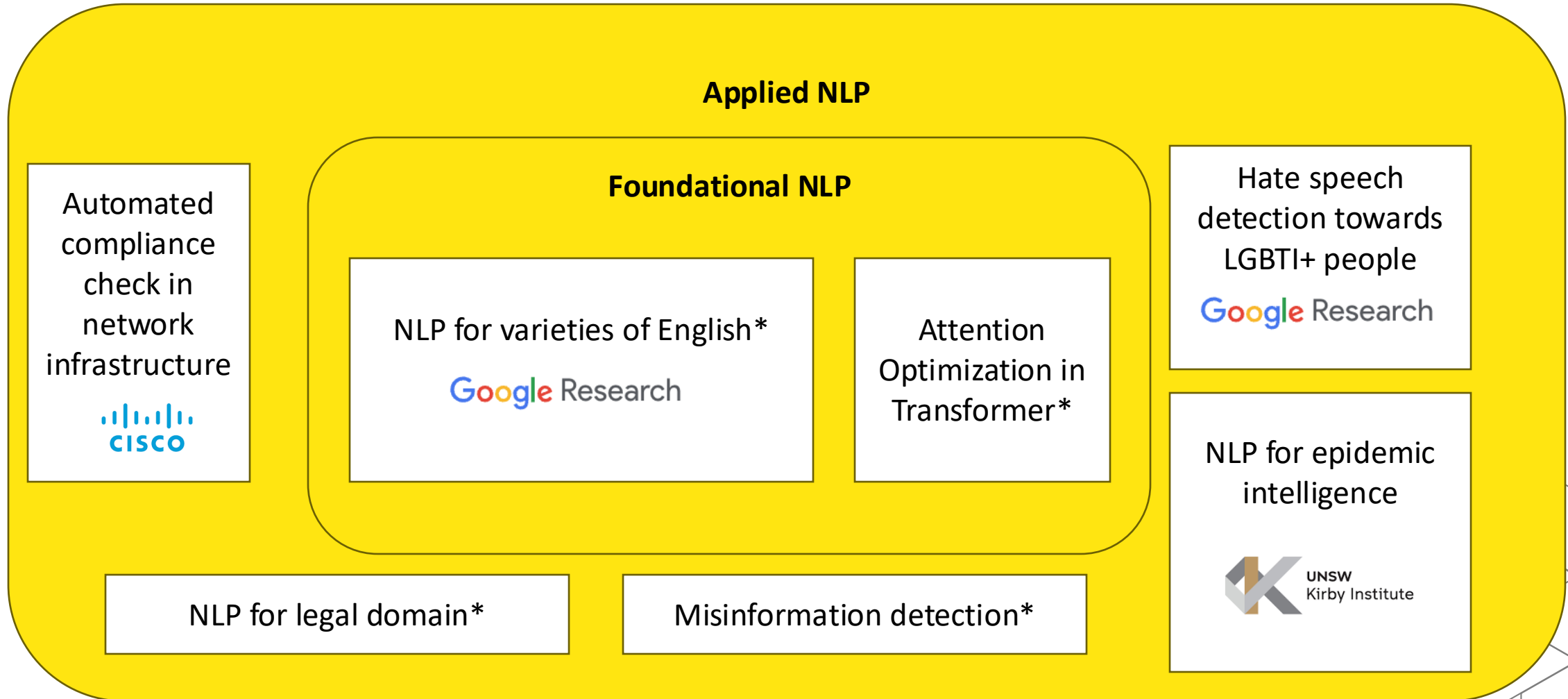
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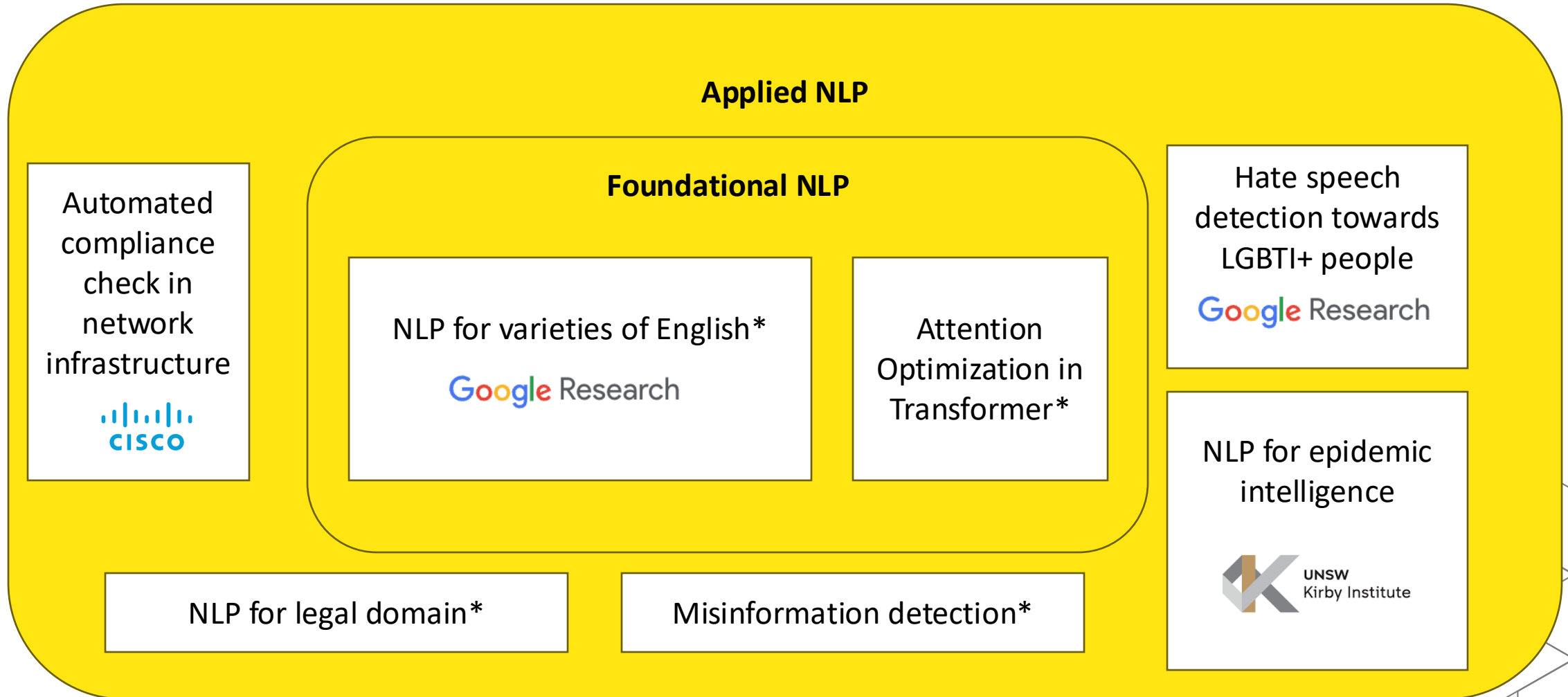
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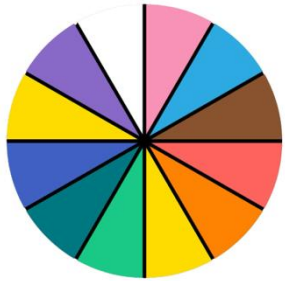


# Current Research in NLP

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# Engagement



Co-lead, UNSW Community of Practice for Inclusive Research with Queer and Trans people, and people with variations of sex characteristics (Intersex)

”3MTT using AI-generated Slides”:  
Diversity Festival 2024



Science Comedy Talk at Sydney Fringe Festival

Supported by School of Computer Science & Engineering, UNSW

<https://www.youtube.com/watch?v=5sXfkvBxVmY>

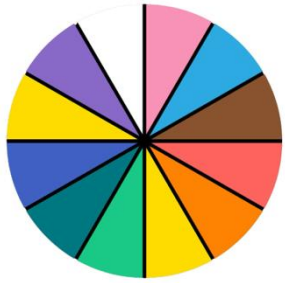
Organising Co-Chair, Rainbow AI Australia  
*Funded by Google’s exploreCSR grant*



Talks on ‘Introduction of AI/LLMs’ at: AI and Courts Symposium by High Court of Australia, National Judicial Orientation Program, NSW Supreme Court Conference, WA Magistrates’ Society Conference

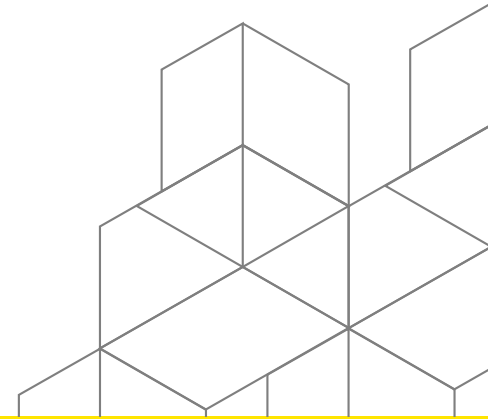
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# Engagement



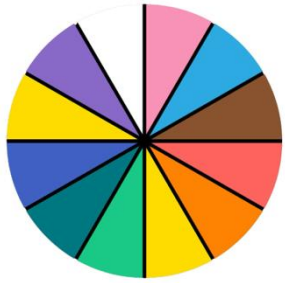
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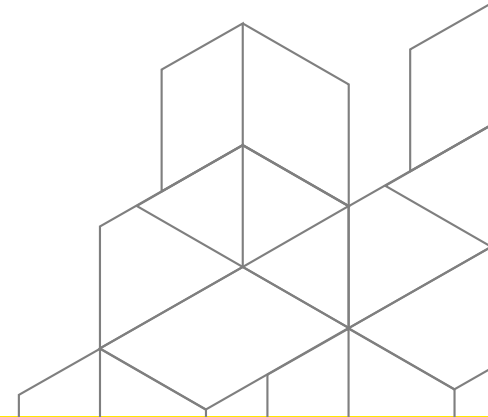
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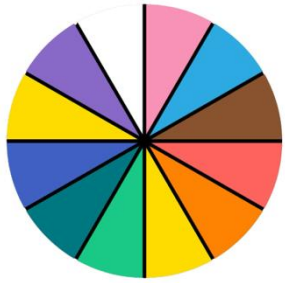
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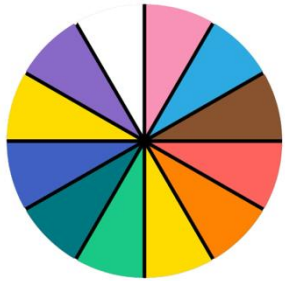
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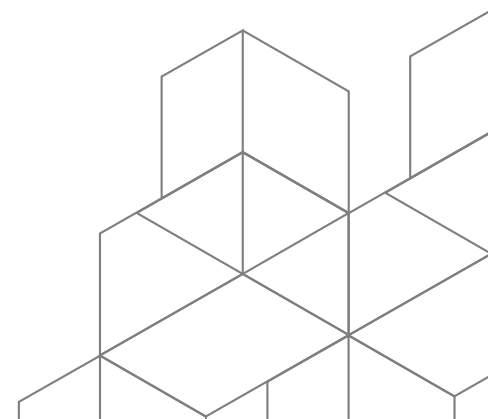
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# Please reach out...

... if you are a linguist OR



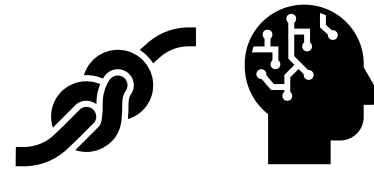
... a researcher wanting to apply NLP/LLMs to your domain



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Publications



GitHub

Dr. Aditya Joshi , [aditya.joshi@unsw.edu.au](mailto:aditya.joshi@unsw.edu.au)