

Yang Wang

✉ Y.Wang4@sheffield.ac.uk

☎ +44 7840157260

🏠 Personal Website

Education

University of Sheffield (*Distinction*)

MSc Computer Science with Speech and Language Processing

Sheffield, UK

Oct 2020 - Sept 2021

National Chung Hsing University

BSc Applied Mathematics

Taichung, TW

Sept 2014 - June 2018

Working Experience

University of Sheffield

ML and NLP Engineer, KTP Associate

Sheffield, UK

April 2023 – Present

- Pioneered a novel textual adversarial defence method for mitigating text-based adversarial attack, resulting in a 30% improvement in system robustness in terms of performance drop rate.

Automated Analytics

Research Intern

Doncaster, UK

November 2021 - September 2022

- Spearheaded the development and implementation of an advanced call categorisation system, leading to a 20% increase in classification accuracy, significantly surpassing the performance of the previous model.
- Engineered and deployed a sophisticated Natural Language Processing (NLP) toolkit as a Flask REST API on Amazon EC2, enhancing system accessibility and scalability for real-time data processing applications.

VoiceBase Centre

Research Intern

Sheffield, UK

May 2021 - May 2022

- Designed a speaker embeddings de-mixing pipeline using x-vector within a PyTorch-based mini-framework.

Publications

1. **Y. Wang**, C. Xiao, Y. Li, S. Middleton, N. Moubayed, C. Lin, *Adversarial Defence without Adversarial Defence*, Transactions of the Association for Computational Linguistics (**TACL**), *Under Review*.
 - Proposed a novel approach by incorporating a plug-and-play module into any pre-trained language model, enabling the off-the-shelf model to inherently acquire adversarial robustness without the necessity for explicit training on adversarial examples.
2. **Y. Wang**, Q. Liang, C. Xiao, Y. Li, N. Moubayed, C. Lin, *Audio Contrastive based Fine-tuning*, Transactions on Audio, Speech, and Language Processing (**TASLP**), *Under Review*. **Link:** <https://arxiv.org/abs/2309.11895>.
 - Introduced an efficient fine-tuning approach called AUDIOCONFIT characterised by robustness and generalisability, which could capture robust representations and improve the discriminative power of the off-the-shelf models.
3. **Y. Wang**, D. Gass, C. Lin, *Achieving Trading Alpha through Limited Financial News*, The 62nd Annual Meeting of the Association for Computational Linguistics (**ACL**), *Under Review*.
 - Presented a trading framework ROSETTA (**R**obust **S**entiment filter via **T**ext-**T**rend **A**lignment) to align the trades in the harmony with the LLMs-informed sentiment-driven trend, and used Combinatorially Symmetric Cross Validation (CSCV) to implement strategy performance tests.
4. **Y. Wang**, C. Lin, *Two Encoders are Better than One in Multi-turn Dyadic Dialogue*, The 62nd Annual Meeting of the Association for Computational Linguistics (**ACL**), *Under Review*.
 - Implemented DELIGHT (**D**ual-stream **E**ncoder with **L**ightGBM), which uses two separate encoding pathways to process different inputs in multi-turn dyadic dialogue systems.

Awards

1. Achieved 1st place in Cinnamon AI Bootcamp product launch competition against 3 teams.
2. Mental Arithmetic Degree 5 Certificate administered by the International Examinations Board of the Chinese Abacus & Mental Arithmetic Association

Additional Experience

1. Team member of England National Volleyball Team in NVL Super League 2021/2022.
2. Team member of Yorkshire Men's Super League (currently 1st ranking) 2023/2024.
3. Leeds Malaysian Games 2nd place in 2024 administered by Malaysian Society (MSOC).
4. Won 1st place in the final of the National Student Music Competition (Group A).