XIA CUI

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EDUCATION

University of Liverpool, UK *Apr 2016 - Jun 2020*

PhD Computer Science

- Dissertation: Learning Transferable Features for Unsupervised Domain Adaptation in Natural Language Processing

- Supervisors: Prof. Danushka Bollegala & Prof. Frans Coenen

University College London, UK *Sep 2013 - Nov 2015*

MSc Web Science and Big Data Analytics

- Dissertation: Evaluation of Speech/Music Discrimination Softwares for Broadcast Content

- Supervisors: Prof. Jun Wang (UCL) & Matt Haynes (BBC R&D)

University of Liverpool, UK *Sep 2010 - Jul 2013*

BSc(Hons.) Internet Computing Upper Second-Class

FULL-TIME WORK EXPERIENCE

Manchester Metropolitan University Manchester, UK / Wuhan, China

Lecturer in Software Engineering *Jan 2023 - Present*

· Member of Manchester Met / Hubei University Joint Education Institute (JEI), and Human-Centred Computing Group, Centre for Advanced Computational Science (CfACS).

· Work with staff based in Hubei University to design and deliver joint units.

· Conduct and lead research project in multi-modal Learning (Natural Language and Image Processing).

The University of Manchester & VoiceIQ Ltd Manchester, UK

Machine Learning & Natural Language Processing Scientist (KTP Associate) *Jul 2020 - Jan 2023*

· Knowledge Transfer Partnerships (KTP) research project funded by Innovate UK on detecting vulnerable people in telephone conversations.

· Conducted research on speech processing and natural language processing related to identifying indicators of vulnerability for the speakers such as age, accent, emotion and health status.

· Identified relevant data resources and used the identified data to develop the detection system.

· Interacted with the development team to integrate the developed system into commercial products.

OTHER WORK EXPERIENCE

Richmond American University London London, UK

External Examiner *Feb 2024 - Present*

· Provide professional suggestions on BSc (Hons) Computer Science with Combined Studies at RAUL.

University of Liverpool Liverpool, UK

Graduate Teaching Assistant *Jan 2017 - Feb 2020*

· Supported teaching in lectures and lab exercises at the Department of Computer Science.

· Assessed undergraduate and postgraduate student coursework and invigilated exams.

University of Liverpool   Liverpool, UK
Guest Lecturer   *Jan 2017 - Feb 2020*

· Delivered guest lectures to the postgraduate students at the Department of History by invitation.
· Designed lecture materials on the basics of Computing including various topics: General Computer Architecture, Number Representation in Computers, File Systems, Networking, Semantic Web, Algorithms and Programming Paradigms.

Liverpool International College (Kaplan, Inc.)   Liverpool, UK
Seasonal Tutor   *Apr 2016 - Jul 2017*

· Assisted exam invigilation of entrance exams for pre-uni students.

BBC Research & Development   London, UK
Research Intern   *Jun 2014 - Sep 2014*

· Researched speech and music discrimination, analysed media contents (radio) and transcripts, and designed and developed an evaluation framework using Ruby.
· Detail: `http://www.bbc.co.uk/rd/blog/2014/11/evaluating-speech-music-discriminators`

TEACHING/ADMISSION

Manchester Metropolitan University (2023 - Present)

1. Teaching: Databases (L4), Web Development (L4, Unit Lead), Team project (L4, Unit Lead), Graduate Skills (L4, Unit Lead), Thematic Projects (L5), Industry & Community Engagement (L5), Full-Stack Web Development (L5, Unit Lead), Software Testing & Quality Assurance (L6, Unit Lead)
2. Supervision: Projects (MSc)
3. Assessment: Project Showcases (BSc), End-Point Assessment on Digital Technology Solutions (DTS) Degree Apprenticeship, Projects (MSc)
4. Quality Assurance: BSc Software Engineering at Manchester Met / Hubei University JEI

University of Liverpool (2017 - 2020)

1. Lab Support: App Development (L5), Mobile Computing (L6), Data Mining and Visualisation (L7), Advanced Object Oriented C Languages (L5), Software Engineering (L5), Applied Database Management (L5), Professional Skills & Research Methods in Computer Science (L4&7).

ACADEMIC SERVICES

1. Member of the Association for Computational Linguistics (ACL) and the Association for Information Systems (AIS).
2. Reviewer for Neurocomputing Journal, The Computer Journal, Computer Speech and Language Journal and IEEE Transactions on Neural Networks and Learning Systems.
3. Reviewer for Annual Conference of ACL, Empirical Methods in Natural Language Processing (EMNLP), the Web Conference (WWW) and ACL Rolling Review.
4. Program Committee for Workshops on Domain Adaptation for NLP (Adapt-NLP) and Representation Learning for NLP (Repl4NLP).
5. Publicity Chair for the 28th Conference on Medical Image Understanding and Analysis (MIUA 2024).
6. External Verification Panellist for BSc(Hons) Software Design and Development at Jiangxi University of Technology (JXUT)/Richmond American University London (RAUL), August 2023.
7. Volunteer for 2018 Society for the Study of Artificial Intelligence and Simulation of Behaviour (AISB) Convention, University of Liverpool and 2018-2019 TEDxLiverpool.
8. Demonstrator for 2018 LEGO Rovers Robot Summer Workshops (Outreach Activities).

INVITED TALKS/PRESENTATIONS/PANELS

1. Poster Presentation on *Learning a model in mixed-annotator datasets using annotator ranking scores as training weights* in 2nd Cardiff NLP Summer Workshop, Cardiff NLP Group, Cardiff University, Jun 2023 (Cardiff, UK).
2. Panel Discussant on *Artificial Intelligence and Psychotherapy Research*, Society of Psychotherapy Research 54th International Annual Meeting, Jun 2023 (Dublin, Ireland).
3. Work in Progress Presentation on *Developing an AI-powered system for detecting indicators of mental health difficulties and negative life events using social media posts*, Cyberpsychology Annual Conference, The British Psychological Society, Sep 2022 (Brighton, UK).
4. Guest Talk on *Detecting Text Related to Mental Health using AI*, Department of Psychology, The University of Manchester, Dec 2021 (Manchester, UK).

RESEARCH STUDENT SUPERVISION

Current Students:

1. Sakib Ahammed, working on Multimodal clinical and imaging learning algorithms for skin lesion analysis [PhD 2024-, Principal Supervisor]

Completed Students

1. Zihao Li, Controllable Text Simplification [MPhil 2024, Co-supervised with Dr. Matthew Shardlow]

PUBLICATIONS

1. **Xia Cui**. xiacui at SemEval-2023 task 11: Learning a model in mixed-annotator datasets using annotator ranking scores as training weights. In *Proceedings of the The 17th International Workshop on Semantic Evaluation (SemEval-2023)*, pages 1076–1084, Toronto, Canada, July 2023. Association for Computational Linguistics.

2. **Xia Cui**, Amila Gamage, Terry Hanley, and Tingting Mu. Identifying Indicators of Vulnerability from Short Speech Segments Using Acoustic and Textual Features. In *Proc. Interspeech 2021*, pages 1569–1573, 2021. doi: 10.21437/Interspeech.2021-1525.

3. **Xia Cui** and Danushka Bollegala. Multi-source attention for unsupervised domain adaptation. In *Proceedings of the 1st Conference of the Asia-Pacific Chapter of the Association for Computational Linguistics and the 10th International Joint Conference on Natural Language Processing (AACL-IJCNLP)*, pages 873–883, 2020.

4. **Xia Cui** and Danushka Bollegala. Self-adaptation for unsupervised domain adaptation. In *Proceedings of the International Conference on Recent Advances in Natural Language Processing (RANLP)*, pages 213–222, Varna, Bulgaria, 2019.

5. **Xia Cui**, Noor Al-Bazzaz, Danushka Bollegala, and Frans Coenen. A comparative study of pivot selection strategies for unsupervised cross-domain sentiment classification. *The Knowledge Engineering Review*, 33(5):1–12, 2018a.

6. **Xia Cui**, Sadamori Kojaku, Naoki Masuda, and Danushka Bollegala. Solving feature sparseness in text classification using core-periphery decomposition. In *Proceedings of the Seventh Joint Conference on Lexical and Computational Semantics (*SEM)*, pages 255–264. Association for Computational Linguistics, 2018b.

7. **Xia Cui**, Frans Coenen, and Danushka Bollegala. Effect of data imbalance on unsupervised domain adaptation of part-of-speech tagging and pivot selection strategies. In Lus Torgo, Bartosz Krawczyk, Paula Branco, and Nuno Moniz, editors, *Proceedings of the First International Workshop on Learning with Imbalanced Domains: Theory and Applications*, volume 74 of *Proceedings*

of Machine Learning Research, pages 103–115, ECML-PKDD, Skopje, Macedonia, 22 Sep 2017b. PMLR.

8. **Xia Cui**, Frans Coenen, and Danushka Bollegala. Tsp: Learning task-specific pivots for unsupervised domain adaptation. In *Proceedings of the European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML-PKDD)*, pages 754–771, 2017a.

9. Frans A. Oliehoek, Rahul Savani, Elliot Adderton, **Xia Cui**, David Jackson, Phil Jimmieson, John Christopher Jones, Keith Kennedy, Ben Mason, Adam Plumbley, and Luke Dawson. Liftupp: Support to develop learner performance. In Elisabeth André, Ryan Baker, Xiangen Hu, Ma. Mercedes T. Rodrigo, and Benedict du Boulay, editors, *Proceedings of the International Conference on Artificial Intelligence in Education (AIED)*, pages 553–556, Cham, 2017. Springer International Publishing. ISBN 978-3-319-61425-0.