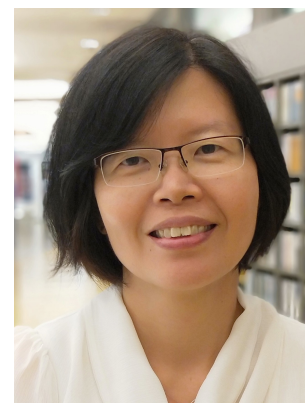


LO Siaw Ling

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Education

PhD, University of Newcastle, Australia, 2017
Master of Science, National University of Singapore, Singapore, 2005
Bachelor of Computer, University of Western Australia, Australia, 1995

Skill Set

applied text analytics, AI in education

Academic Appointments

Associate Professor of Information Systems (Education), School of Computing and Information Systems, SMU, Jan 2024 - Present

Assistant Professor of Information Systems (Education), School of Computing and Information Systems, SMU, Dec 2020 - Dec 2023

Senior Lecturer of Information Systems, School of Computing and Information Systems, SMU, Dec 2018 - Nov 2020

Academic Administrative Positions

Mentor, SCIS Pedagogy Course, School of Computing and Information Systems, SMU, Jul 2022 - Present

RESEARCH

Research Interests

Research Statement:

Leverage and apply practical research methods to solve real-world problems

Research Interest:

My research focuses on developing practical approaches to extract valuable insights from diverse data sources using advanced techniques in AI, and natural language processing. I aim to transform unstructured data into actionable intelligence to drive decision-making and create value. Key areas of focus include using AI in education to personalize learning and refine the pedagogical integration of generative AI, and studying the future of work and workforce dynamics. My interdisciplinary research seeks to empower organizations and communities to make informed, transformative decisions across sectors like education and business.

My current research projects are,

- AI in education (PromptTutor, agentic evaluation metrics for MCQ, semi-open ended question grading)
- Next job prediction using LLMs
- Actionable situational intelligence for urban events using social media

Research and Project Areas

Data Science & Engineering

- Knowledge Discovery & Data Mining
- Machine Learning & Deep Learning
- Natural Language Processing & Text Mining

Information Systems & Management

- Social Media Marketing & Digital Strategies

Learning & Pedagogy

- Learning & Curriculum Analytics

Active Citizenry & Communities

- Urban & Social Analytics

PublicationsJournal Articles [Refereed]

Harnessing the power of AI-instructor collaborative grading approach: Topic-based effective grading for semi open-ended multipart questions, by WIN MYINT, Phyo Yi; LO, Siaw Ling; ZHANG, Yuhao. (2024). *Computers and Education: Artificial Intelligence*, 71-18. <https://doi.org/10.1016/j.caeai.2024.100339> (Published)

Empowering crisis information extraction through actionability event schemata and domain-adaptive pre-training, by ZHANG, Yuhao; LO, Siaw Ling; WIN MYINT, Phyo Yi. (2024). *Information & Management*, <https://doi.org/10.1016/j.im.2024.104065> (Advance Online)

Unveiling the dynamics of crisis events: Sentiment and emotion analysis via multi-task learning with attention mechanism and subject-based intent prediction, by WIN MYINT, Phyo Yi; LO, Siaw Ling; ZHANG, Yuhao. (2024). *Information Processing and Management*, 61 (4), 1-20. <https://doi.org/10.1016/j.ipm.2024.103695> (Published)

Automated doubt identification from informal reflections through hybrid sentic patterns and machine learning approach, by LO, Siaw Ling; TAN, Kar Way; OUH, Eng Lieh. (2021). *Research and Practice in*

Technology Enhanced Learning, 16 (1), 1-24. <https://doi.org/10.1186/s41039-021-00149-9> (Published)

An unsupervised multilingual approach for online social media topic identification, by LO, Siaw Ling; CHIONG, Raymond; CORNFORTH, David. (2017). *Expert Systems with Applications*, 81 282-298. <https://doi.org/10.1016/j.eswa.2017.03.029> (Published)

Multilingual sentiment analysis: from formal to informal and scarce resource languages, by LO, Siaw Ling; CAMBRIA, Erik; CHIONG, Raymond; CORNFORTH, David. (2017). *Artificial Intelligence Review*, 48 (4), 499-527. <https://doi.org/10.1007/s10462-016-9508-4> (Published)

A multilingual semi-supervised approach in deriving Singlish sentic patterns for polarity detection, by LO, Siaw Ling; CAMBRIA, Erik; CHIONG, Raymond; CORNFORTH, David. (2016). *Knowledge-Based Systems*, 105 236-247. <https://doi.org/10.1016/j.knosys.2016.04.024> (Published)

Ranking of high-value social audiences on Twitter, by LO, Siaw Ling; CHIONG, Raymond; CORNFORTH, David. (2016). *Decision Support Systems*, 85 34-48. <http://dx.doi.org/10.1016/j.dss.2016.02.010> (Published)

Using Support Vector Machine Ensembles for Target Audience Classification on Twitter, by LO, Siaw Ling; CHIONG, Raymond; CORNFORTH, David. (2015). *PLoS ONE*, 10 (4), 1-20. <https://doi.org/10.1371/journal.pone.0122855> (Published)

SPLASH: Systematic proteomics laboratory analysis and storage hub, by LO, Siaw Ling; TAO, You; LIN, Qingsong; JOSHI, Shashikant B.; CHUNG, Maxey; HEW, Choy Leong. (2006). *Proteomics: Proteomics and Systems Biology*, 6 (6), 1758-1769. <https://doi.org/10.1002/pmic.200500378> (Published)

Effect of training datasets on support vector machine prediction of protein-protein interactions, by LO, Siaw Ling; CAI, Cong Zhong; CHUNG, Maxey; CHEN, Yu Zong. (2005). *Proteomics: Proteomics and Systems Biology*, 5 (4), 876-884. <https://doi.org/10.1002/pmic.200401118> (Published)

Prediction of RNA-binding proteins from primary sequence by a support vector machine approach, by HAN, Lian Yi; CAI, Cong Zhong; LO, Siaw Ling; CHUNG, Maxey; CHEN, Yu Zong. (2004). *RNA*, 10 (3), 355-368. <https://doi.org/10.1261/rna.5890304> (Published)

Proteome database of hepatocellular carcinoma, by LIANG, Cynthia; NEO, Jason; LO, Siaw Ling; TAN, Gek San; SEOW, Teck Keong; CHUNG, Maxey. (2002). *Journal of Chromatography B*, 771 (1-2), 303-328. [https://doi.org/10.1016/s1570-0232\(02\)00041-7](https://doi.org/10.1016/s1570-0232(02)00041-7) (Published)

Conference Proceedings

Transformer-based Multi-Task Learning for crisis actionability extraction , by ZHANG, Yuhao; LO, Siaw Ling; WIN MYINT, Phyo Yi. (2023.0). *Proceedings of International Conference on Information Systems 2023, Hyderabad, India, December 10-13*, Atlanta, GA, United States of America: Association for Information Systems. (Published)

Machine-learning approach to automated doubt identification on stack overflow comments to guide programming learners, by CHEN, Tianhao; OUH, Eng Lieh; TAN, Kar Way; LO, Siaw Ling. (2023.0). *Proceedings of 2023 Pacific Asia Conference on Information Systems, Nanchang, China, July 8-12*, (pp. 1-16) Nanchang, China: PACIS. (Published)

Impact of difficult negatives on Twitter crisis detection, by ZHANG, Yuhao; LO, Siaw Ling; WIN MYINT, Phyo Yi. (2023.0). *Proceedings of Pacific Asia Conference on Information Systems 2023, Nanchang, China, July 8-12*, (pp. 1-15) Nanchang, China: <https://aisel.aisnet.org/pacis2023/156> (Published)

Is a pretrained model the answer to situational awareness detection on social media?, by LO, Siaw Ling; LEE, Kahhe; ZHANG, Yuhao. (2023.0). *2023 56th Hawaii International Conference on System Sciences: Hawaii, January 3-6: Proceedings*, (pp. 2110-2119) Hawaii: IEEE Computer Society. <https://hdl.handle.net/10125/102894> (Published)

Reflection as an agile course evaluation tool, by LO, Siaw Ling; CHER, Pei Hua; BELLO, Fernando. (2022.0). *Proceeding of 23rd International Conference, Durham, UK, 2022 July 27-31*, (pp. 293-297) Durham University, UK: Springer. http://doi.org/10.1007/978-3-031-11647-6_55 (Published)

AI-enabled adaptive learning using automated topic alignment and doubt detection, by TAN, Kar Way; LO, Siaw Ling; OUH, Eng Lieh; NEO, Wei Leng. (2022.0). *Pacific Asia Conference on Information Systems PACIS 2022: Virtual, July 5-9: Proceedings*, (pp. 1-16) Virtual: AIS. <https://aisel.aisnet.org/pacis2022/110/>

(Published)

Do sequels outperform or disappoint? Insights from an analysis of Amazon echo consumer reviews, by SHIM, Kyong Jin; LO, Siaw Ling; LIEW, Su Yee. (2022.0). *2022 55th Hawaii International Conference on System Sciences HICSS: Virtual, January 4-7: Proceedings*, (pp. 2950-2959) Los Alamitos, CA: IEEE Computer Society. <https://doi.org/10.24251/HICSS.2022.364> (Published)

Mining informal and short student self-reflections for detecting challenging topics: A learning outcomes insight dashboard, by LIN, Ong De; GOTTIPATI, Swapna; LO, Siaw Ling; SHANKARARAMAN, Venky. (2021.0). *2021 IEEE Frontiers in Education Conference (FIE): Lincoln, NE, October 13-16: Proceedings*, (pp. 1-9) Piscataway, NJ: IEEE. <https://doi.org/10.1109/FIE49875.2021.9637181> (Published)

Rethinking work study programs: A data analytics work study program for undergraduates, by LO, Siaw Ling; GOTTIPATI, Swapna; SHANKARARAMAN, Venky. (2021.0). *Proceedings of 27th Americas Conference on Information Systems, AMCIS 2021, Virtual, August 9-13*, Montreal: AIS. (Published)

Do my students understand? Automated identification of doubts from informal reflections, by LO, Siaw Ling; TAN, Kar Way; OUH, Eng Lieh. (2019.0). *ICCE 2019: Proceedings of the 27th International Conference on Computers in Education, Kenting, Taiwan, December 2-6*, (pp. 1-10) Kenting, Taiwan: Asia-Pacific Society for Computers in Education. (Published)

Use of a high-value social audience index for target audience identification on Twitter, by LO, Siaw Ling; CORNFORTH, David; CHIONG, Raymond.. (2015.0). *Proceedings of the 1st Australasian Conference on Artificial Life and Computational Intelligence, ACALCI 2015, Newcastle, Australia, February 5-7, 2015*, (pp. 323-336) Switzerland: Springer. https://doi.org/10.1007/978-3-319-14803-8_25 (Published)

Effects of training datasets on both the extreme learning machine and support vector machine for target audience identification on twitter, by LO, Siaw Ling; CORNFORTH, David; CHIONG, Raymond. (2014.0). *Proceedings of the 5th International Conference on Extreme Learning Machines, Singapore, 2014 December 10-12*, (pp. 417-434) Singapore: Springer Link. https://doi.org/10.1007/978-3-319-14063-6_35 (Published)

Identifying the high-value social audience from Twitter through text-mining methods, by LO, Siaw Ling; CORNFORTH, David; CHIONG, Raymond. (2014.0). *Proceedings of the 18th Asia Pacific Symposium on Intelligent and Evolutionary Systems, Singapore, 2014 November 10-12*, (pp. 325-339) Singapore: Springer Link. https://doi.org/10.1007/978-3-319-13359-1_26 (Published)

Research Grants

Singapore Management University

Actionable Situational Intelligence for Urban Events using Social Media, 0.0, ST Engineering Mission Software & Services Pte Ltd , PI (Project Level): LO Siaw Ling, 2021, S\$865,569

PromptTutor - Generative AI-enabled Personalised Tutor for Reflection Learning in Programming Courses, Tertiary Education Research Fund (TRF), Ministry of Education (MOE) , PI (Project Level): OUH Eng Lieh , Co-PI (Project Level): TAN Kar Way, LO Siaw Ling

Other Institutions

DE.AI: Debunking misconceptions for Enhanced Student Learning with the Power of Generative AI, Education Research Fellowship, Center of Teaching Excellence PI (Project Level): LO Siaw Ling, 2023

Adaptive Learning with Automated Doubt Mining and Topic Alignment, Technology-Enabled Learning Grant, Centre of Teaching Excellence PI (Project Level): TAN Kar Way, Co-PI (Project Level): LO Siaw Ling, OUH Eng Lieh, 2020

Content-based Frailty Classification System, NYP-TTSH Grant Call, Nanyang Polytechnic and Tan Tock Seng Hospital PI (Project Level): LO Siaw Ling, 2018, SGD29,000

Content-based Target Audience Profiling, MOE Translation and Innovation Fund, Ministry of Education PI (Project Level): LO Siaw Ling, 2012, SGD233,125

Mining Opinions from Social Media, Tote Fund Model Project, Tote Board PI (Project Level): LO Siaw Ling, 2010, SGD85,000

TEACHING

Teaching Areas

Digital Business - Technology and Transformation
Digital Analytics Technology
Analytics Foundation
Business Process Analysis & Solutioning

Courses Taught

Singapore Management University

Undergraduate Programmes :

Analytics and Cloud Technology Work-Study Elective
Analytics Foundation
Business Process Analysis & Solutioning
Data Analytics and Technology Guided External Course
Digital Analytics Technology
Digital Business - Technologies and Transformation
Google Analytics Work-Study Elective
IS Project Experience (Applications)
IS/SMT/C&L Project Experience (Research)

Postgraduate Professional Programmes :

Project

Teaching Publications

Cases

Keeping the customer satisfied: The fall and rise of Sa Sa (A) and (B), by LO, Siaw Ling; LAU, Yi Meng; LIM, Thomas. (2024). SMU-24-0019. <https://cmp-shop.smu.edu.sg/products/keeping-the-customer-satisfied-the-fall-and-rise-of-sa-sa-a-and-b?variant=42064765812778> (Published)

Blazing a trail in the charity sector: Singapore's Metta Welfare Association raises funds by selling NFTs, by LO, Siaw Ling; NG, Graham; LIM, Thomas. (2023). SMU-23-0017. <https://cmp.smu.edu.sg/case/5866> (Published)

Going digital? Mission possible: Hawkers United – Dabao 2020’s takeaway from the pandemic fallout, by LAU, Yi Meng; LO, Siaw Ling; LIM, Thomas. (2020). SMU-20-0034. <https://cmp.smu.edu.sg/case/4636> (Published)

Teaching Notes

Keeping the customer satisfied: The fall and rise of Sa Sa (A) and (B), by LO, Siaw Ling; LAU, Yi Meng; LIM, Thomas. (2024). SMU-24-0019TN. <https://cmp-shop.smu.edu.sg/products/keeping-the-customer-satisfied-the-fall-and-rise-of-sa-sa-a-and-b?variant=42064765812778> (Published)

Blazing a trail in the charity sector: Singapore’s Metta Welfare Association raises funds by selling NFTs, by LO, Siaw Ling; NG, Graham; LIM, Thomas. (2023). SMU-23-0017. <https://cmp.smu.edu.sg/case/5866> (Published)

Going digital? Mission possible: Hawkers United – Dabao 2020’s takeaway from the pandemic fallout, by LAU, Yi Meng; LO, Siaw Ling. (2020). SMU-20-0034. <https://cmp.smu.edu.sg/case/4636> (Published)