POTSAWEE MANAKUL

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RESEARCH INTERESTS

- **Summarization and Generation**: Summarization systems, Summary evaluation frameworks
- **Automatic Evaluation**: Hallucination detection, LLM evaluation
- **Low-resource NLP**: Improving low-resource representations and developing new resources

EDUCATION

University of Cambridge — Cambridge, UK
Ph.D. in Information Engineering (NLP) — Oct 2019 – May 2024
- Work in the Machine Intelligence Lab under the supervision of Prof. Mark Gales
- Recipient of the Cambridge International & St John's College Scholarship
- Research Areas: Natural Language Processing (NLP) and Machine Learning (ML)
  → Summarization, Question-Answering, Language Model Evaluation, Hallucination Detection
- First-author publications at top-tier NLP/Speech conferences, e.g. **ACL**, **EMNLP**, ***ACL**, **InterSpeech**

University of Cambridge — Cambridge, UK
M.Eng. in Information and Computer Engineering — Oct 2018 – Jun 2019
- First-Class Honour with Distinction
- Research project on deep learning for grammatical error detection and correction

University of Cambridge — Cambridge, UK
B.A. in Information and Computer Engineering — Oct 2015 – Jun 2018
- **top 3%** on average in my engineering cohort of about 300 students

EXPERIENCE

SCB 10X — Bangkok, Thailand
Senior AI Researcher — Apr 2024 – Present
- Part of a newly created AI research team under the SCBX group
- Work on low-resource NLP in collaboration with regional and global NLP labs

SCB 10X — Remote
AI Engineer (venture builder) — Nov 2023 – Feb 2024
- Part of Venture Builder with the goal of creating a start-up focusing on AI in Thailand
- Developed "Typhoon-7B" – state-of-the-art open-source Thai large language model
- Developed Thai LLM Evaluation Benchmarks

Amazon — Berlin, Germany
Applied Scientist Intern — Sep 2021 – Mar 2022
- Developed video summarization model which improved automation rate by 4%
- Published a paper at the Amazon Computer Vision Conference (ACVC) 2022

University of Cambridge — Cambridge, UK
Undergraduate Research Intern — Jun 2018 – Aug 2018
- Developed deep learning models for grammatical error detection
- Co-authored a paper accepted at ICASSP 2019

MediaTek — Cambourne, UK
Software Engineering Intern — Jun 2017 – Sep 2017

Healthera — Cambridge, UK
Software Engineering Intern — Jun 2016 – Aug 2016

Selected Publications

Google Scholar: https://scholar.google.com/citations?hl=en&user=dVgn6boAAAAJ

- A. Liusie, **P. Manakul** and M.J.F. Gales, "LLM Comparative Assessment: Zero-shot NLG Evaluation through Pairwise Comparisons using Large Language Models", in **EACL** 2024 (main).

- **P. Manakul**, A. Liusie and M.J.F. Gales, "SelfCheckGPT: Zero-Resource Black-Box Hallucination Detection for Generative Large Language Models", in **EMNLP** 2023 (main).

- **P. Manakul**, A. Liusie and M.J.F. Gales, "MQAG: Multiple-choice Question Answering and Generation for Assessing Information Consistency in Summarization", in **AACL** 2023 (main).
  → Area Chair Award (Generation and Summarization)

- **P. Manakul**, Y. Fathullah, A. Liusie, V. Raina, V. Raina, and M.J.F.. Gales, "CUED at ProbSum 2023: Hierarchical Ensemble of Summarization Models", in **BioNLP Workshop at ACL** 2023.
  → Best-performing system on the Problem List Summarization shared task

- **P. Manakul** and M.J.F. Gales, "Sparsity and Sentence Structure in Encoder-Decoder Attention of Summarization Systems", in **EMNLP** 2021 (main).

- **P. Manakul** and M.J.F. Gales, "Long-Span Summarization via Local Attention and Content Selection", in **ACL** 2021 (main).

- **P. Manakul** and M.J.F. Gales, "CUED_SPEECH at TREC 2020 Podcast Summarisation Track", in Text REtrieval Conference (**TREC**) 2020.
  → Won 1st place in the Spotify Podcast Summarisation Track, out of 8 teams & 22 systems

- **P. Manakul**, M.J.F. Gales, L. Wang, "Abstractive Spoken Document Summarization Using Hierarchical Model with Multi-Stage Attention Diversity Optimization", in **InterSpeech** 2020.
  → Best Student Paper Finalist

Selected Honours & Awards

ML/AI Awards

- AACL-IJCNLP 2023 Area Chair Paper Award (Generation and Summarization)
- 1st place in the Medical Note Problem List Summarization at the BioNLP Workshop at ACL 2023
- 1st place in the Spotify Podcast Summarization Challenge at TREC 2020 Podcasts Track
- InterSpeech 2020 Best Student Paper Finalist

University Scholarships and Awards

- Cambridge International & St John's College Scholarship (Full funding for PhD) — 2019
- UARP (Undergraduate Academic Research Project) — 2018
- Winifred Georgina Holgate Pollard Memorial Prize (University Prize) — 2017
- BP 1st Year Prize (for achieving top 1% in 1st-year undergraduate engineering) — 2016

Olympiads

- Silver Medal from 45th International Physics Olympiad (IPhO) in Astana, Kazakhstan — 2014
- Gold Medal from 15th Asian Physics Olympiad (APhO) at National University of Singapore — 2014
- Bronze Medal from 14th Asian Physics Olympiad (APhO) in Bogor, Indonesia — 2013

Professional Services

Reviewer

- ACL Rolling Review 2024
- NeurIPS 2023
- ICLR 2024
- ICML 2023, 2024
- InterSpeech 2023, 2024
- IEEE Transactions on Audio, Speech, and Language Processing 2022, 2023, 2024

Updated: March 2024