# POTSAWEE MANAKUL

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#### RESEARCH INTERESTS

- Large Language Model: Multimodal Language Models, Reasoning, Unlearning
- Low-resource NLP: Cross-lingual representations, Benchmark and Corpora Creation
- Automatic Evaluation: Hallucination Detection, LLM Evaluation

#### **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 Research Scientist

Nov 2023 – Present

- Initiate research collaboration with Cambridge and VISTEC
- Work on "Typhoon Multimodal" (Audio & Vision)
- Work on "Typhoon-7B" state-of-the-art open-source Thai large language model
- Work on Thai LLM Evaluation Benchmarks, including HELM-Thai
- Part of a founding team (Typhoon Team) for a new AI research lab of the SCBX group, previously under Venture Builder programme with a goal of creating a start-up focusing on LLMs

**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.
    - $\rightarrow$  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
- ullet Thai Government Scholarship 2015

#### **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

#### REVIEWER SERVICE

- ACL Rolling Review: 2024/02, 2024/04, 2024/06, 2024/10, 2024/12
- NeurIPS: 2023, 2024
- ICLR: 2024, 2025
- ICML: 2023, 2024
- AAAI: 2025
- InterSpeech: 2023, 2024
- Conference On Language Modeling (COLM): 2024
- IEEE Transactions on Audio, Speech, and Language Processing: 2022, 2023, 2024

Updated: December 2024