

Yi-Lin Tuan

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Education

- **University of California, Santa Barbara** *from Sep. 2019*
Ph.D. in Computer Science
Advisor: Prof. William Wang
- **National Taiwan University** *Sep. 2013 - June. 2017*
B.S. in Electrical Engineering
Advisors: Prof. Lin-shan Lee, Prof. Hung-yi Lee, Prof. Yun-Nung Chen

PUBLICATIONS

- [1] Yi-Lin Tuan, Ahmed El-Kishky, Adi Renduchintala, Vishrav Chaudhary, Francisco Guzmán, and Lucia Specia. “Quality Estimation without Human-labeled Data”. In: *Accepted by EACL2021 (short paper)* (2021).
- [2] Yi-Lin Tuan, Yun-Nung Chen, and Hung-yi Lee. “DyKgChat: Benchmarking Dialogue Generation Grounding on Dynamic Knowledge Graphs”. In: *EMNLP-IJCNLP (Long Paper)* (2019).
- [3] Feng-Guang Su*, Aliyah R Hsu*, Yi-Lin Tuan, and Hung-Yi Lee. “Personalized Dialogue Response Generation Learned from Monologues”. In: *Interspeech* (2019).
- [4] Yi-Lin Tuan and Hung-Yi Lee. “Improving conditional sequence generative adversarial networks by stepwise evaluation”. In: *IEEE/ACM Transactions on Audio, Speech, and Language Processing* 27.4 (2019), pp. 788–798.
- [5] Che-Ping Tsai*, Yi-Lin Tuan*, and Lin-shan Lee. “Transcribing lyrics from commercial song audio: the first step towards singing content processing”. In: *2018 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*. IEEE. 2018.

PREPRINT AND UNDER REVIEW

- [6] Yi-Lin Tuan, Wei Wei, and William Wang. “Knowledge Injection into Dialogue Generation via Language Models”. In: *arXiv preprint arXiv:2004.14614* (2020).
- [7] Yi-Lin Tuan*, Jinzhi Zhang*, Yujia Li, and Hung-yi Lee. “Proximal Policy Optimization and its Dynamic Version for Sequence Generation”. In: *arXiv preprint arXiv:1808.07982* (2018).

* indicates co-first authors

Experience

- **Facebook Research Intern** *June 2020 - Sep. 2020*
 - Proposed a data synthesis process for quality estimation of machine translation using masked language model. Compared with work using human annotations, we can achieve comparable or even better quality estimation performance [1].

- **National Taiwan University** *Research Assistant* *Sep. 2017 - Aug. 2019*
Advisors: Prof. Hung-yi Lee, Prof. Yun-Nung Chen and Prof. Lin-shan Lee
 - Enhanced information in dialogue generation by dynamically inferring knowledge graphs and collected conversational TV series data paired with knowledge graphs. [2]
 - Increased computational efficiency of sequence generation with generative adversarial networks and reinforcement learning [4, 7]
 - Transferred the techniques for speech recognition to lyrics recognition and collected vocal-only commercial English songs data for transcribing. [5]
 - Led and advised undergraduate students working on open-domain dialogue generation. [3, 7]
- **National Taiwan University** *Teaching Assistant* *Spring 2017*
 - CommE 5045, Machine Learning and Having it Deep and Structured. Tutored in adversarial learning, deep reinforcement learning and chit-chat chatbots.

Service

- **Reviewer:** AAAI 2020
- **Second Reviewer**
 - Conferences: ACL 2018, EMNLP 2018, IJCAI 2019, EMNLP 2019
 - Journals: TASLP, CSL, APSIPA

Awards & Honors

- **Best Paper Award, SoCalNLP19** *Sep. 2019*
(Southern California Natural Language Processing Symposium)
Awarded for “*Dynamic Knowledge-Grounded Dialogue Generation through Walking on the Graph*” (the extended abstract of [2]).
- **Outstanding Achievement Award (Innovate Asia Design Contest, Altera)** *Aug. 2016*
Awarded for a designed FPGA mobile 3D projector.
- **NTU Electrical Engineering 1960 Alumni Scholarship** *2014 and 2016*
Awarded twice one-year scholarship.
- **Presidential Award (rank 1/169), National Taiwan University** *2014*

Skills

- **Programming Languages:** Python, C/C++/C#, Shell Script, Matlab, System Verilog
- **Tools:** Pytorch, Tensorflow, Theano, Kaldi, Praat, Git, L^AT_EX