

# YI-LIN (PASCAL) TUAN

✉ pascaltuan@gmail.com ✉ ytuan@cs.ucsb.edu ✎ Pascalson ✎ pascalson.github.io

## EDUCATION

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- PhD, Computer Science, University of California Santa Barbara** 2019 - 2024 (expected)  
Advisor: William Yang Wang
- BS, Electrical Engineering, National Taiwan University** 2013 - 2017  
Advisors: Lin-shan Lee, Hung-yi Lee, Yun-Nung Chen

## WORK EXPERIENCE

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- University of California Santa Barbara, CA, USA** Sep2019 - Present  
Graduate Student Researcher, Advisor: William Yang Wang
- Meta GenAI, NY, USA** Jun2023 - Nov2023  
Research Intern, Manager: Dan Bikel  
• Controlling helpfulness and safety levels in Large Language Models. [Preprint'24]
- Meta AI, CA, USA** Jun2022 - Sep2022  
Research Intern, Mentor: Wenhan Xiong; Manager: Yashar Mehdad  
• Developing alternative large language model architecture for inference efficiency.
- Amazon Alexa AI, MA, USA** Jun2021 - Sep2021  
Applied Scientist Intern, Mentor: Sajjad Beygi; Manager: Maryam Fazel-Zarandi  
• Interpretable and scalable knowledge graph grounded transformer for conversation agent. [ACL'22]
- Facebook AI, CA, USA** Jun2020 - Sep2020  
Research Intern, Mentor: Ahmed El-Kishky; Manager: Paco Guzmán  
• Machine translation quality estimation with no human annotations. [EACL'21]
- National Taiwan University, Taipei, Taiwan** Oct2017 - Jul2019  
Research Assistant, Advisors: Hung-yi Lee, Yun-Nung Chen, Lin-shan Lee  
• Training efficient sequential generative adversarial networks and reinforcement learning frameworks [Journal'18; Preprint'18; Interspeech'19].  
• Dynamic knowledge graph grounded dialogue generation model architecture [EMNLP'19].  
• Benchmarking commercial songs lyrics recognition [ICASSP'18].

## SELECTED RESEARCH

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\* indicates equal contribution. Full list of papers can be found at My Google Scholar

- Yi-Lin Tuan**, Xilun Chen, Eric Michael Smith, Louis Martin, Soumya Batra, Asli Celikyilmaz, William Yang Wang, Daniel M. Bikel. "Towards Safety and Helpfulness Balanced Responses via Controllable Large Language Models". Preprint, 2024.
- Yi-Lin Tuan**, Zih-Yun Chiu, William Yang Wang. "Dynamic Latent Separation for Deep Learning". Preprint, 2024.
- Zih-Yun Chiu\*, **Yi-Lin Tuan**\*, William Yang Wang, Michael Yip. "Flexible Attention-Based Multi-Policy Fusion for Efficient Deep Reinforcement Learning". In: NeurIPS, 2023.
- Yi-Lin Tuan**, Alon Albalak, Wenda Xu, Michael Saxon, Connor Pryor, Lise Getoor, William Yang Wang. "CausalDialogue: Modeling Utterance-level Causality in Conversations". In: ACL (Findings), 2023.
- Alon Albalak, **Yi-Lin Tuan**, Pegah Jandaghi, Connor Pryor, Luke Yoffe, Deepak Ramachandran, Lise Getoor, Jay Pujara, William Yang Wang. "FETA: A Benchmark for Few-Sample Task Transfer in Open-Domain Dialogue". In: EMNLP, 2022.

6. **Yi-Lin Tuan**, Sajjad Beygi, Maryam Fazel-Zarandi, Qiaozi Gao, Alessandra Cervone, and William Yang Wang. “Towards Large-Scale Interpretable Knowledge Graph Reasoning for Dialogue Systems”. In: ACL (Findings), 2022.
7. Lucas Relic, Bowen Zhang, **Yi-Lin Tuan**, Michael Beyeler. “Deep Learning–Based Perceptual Stimulus Encoder for Bionic Vision”. In: ACM Augmented Humans, 2022. **Best Poster Award**
8. **Yi-Lin Tuan**, Connor Pryor, Wenhua Chen, Lise Getoor, and William Yang Wang. “Local Explanation of Dialogue Response Generation”. In: NeurIPS, 2021.
9. **Yi-Lin Tuan**, Ahmed El-Kishky, Adi Renduchintala, Vishrav Chaudhary, Francisco Guzman, and Lucia Specia. “Quality Estimation without Human-labeled Data”. In: EACL, 2021.
10. **Yi-Lin Tuan**, Wei Wei, and William Yang Wang. “Knowledge Injection into Dialogue Generation via Language Models”. Preprint, 2020.
11. **Yi-Lin Tuan**, Yun-Nung Chen, and Hung-yi Lee. “DyKgChat: Benchmarking Dialogue Generation Grounding on Dynamic Knowledge Graphs”. In: EMNLP, 2019. **Best Paper Award at SoCalNLP19**
12. Feng-Guang Su\*, Aliyah R Hsu\*, **Yi-Lin Tuan**, and Hung-Yi Lee. “Personalized Dialogue Response Generation Learned from Monologues”. In: Interspeech, 2019
13. **Yi-Lin Tuan** and Hung-Yi Lee. “Improving conditional sequence generative adversarial networks by step-wise evaluation”. In: IEEE/ACM Transactions on Audio, Speech, and Language Processing 27.4 (2019), pp. 788–798, 2018.
14. **Yi-Lin Tuan\***, Jinzhi Zhang\*, Yujia Li, and Hung-yi Lee. “Proximal Policy Optimization and its Dynamic Version for Sequence Generation”. Preprint, 2018.
15. Che-Ping Tsai\*, **Yi-Lin Tuan\***, and Lin-shan Lee. “Transcribing lyrics from commercial song audio: the first step towards singing content processing”. In: ICASSP, 2018.

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## PROFESSIONAL SERVICES

### Program Committee / Reviewer

- Machine Learning: ICLR (2022-2023), NeurIPS (2023), AAI (2021)
- Natural Language Processing: EMNLP (2022-2023), ACL (2023-2024), ACL Rolling Review (2024)

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## TALKS

<b>Invited talk</b> at Heinrich Heine University Düsseldorf, <i>Modeling Causal-Effect in Conversations</i>	2024
<b>Invited talk</b> at Google AI, <i>Local Explanation of Dialogue Response Generation</i>	2021
<b>Invited talk</b> at EMNLP FEVER workshop, <i>Fact Verification with Semi-Structured Knowledge</i>	2019
<b>Contributed talk</b> at SoCalNLP’19, <i>Dynamic Knowledge-Grounded Dialogue Generation</i>	2019
<b>Invited talk</b> at ASUS, <i>Dialogue Response Generation Grounded on Dynamic Knowledge Graphs</i>	2019

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## TEACHING EXPERIENCE

Teaching Assistant at UCSB CS190I: <i>Natural Language Processing</i>	Winter 2022
Teaching Assistant at NTU CommE 5045: <i>Machine Learning and Having it Deep and Structured</i>	Spring 2017

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## AWARDS

<b>Best Poster Award</b> at ACM Augmented Humans	2022
<b>Best Paper Award</b> at South California NLP Symposium (SoCalNLP)	2019
<b>Academic Excellence Fellowship</b> at University of California Santa Barbara	2019
<b>Electrical Engineering 1960 Alumni Scholarship</b> at National Taiwan University	2016
<b>Outstanding Achievement Award</b> at Altera, Intel	2016
<b>Electrical Engineering 1960 Alumni Scholarship</b> at National Taiwan University	2014
<b>Presidential Award</b> , rank 1/169, at National Taiwan University Electrical Engineering	2014