Andrea Madotto

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WORK EXPERIENCE

Research Scientist at FAIR — Meta
San Francisco, CA — Jan 2022 – Present
Conducting research on Multimodal (Image, Video, Audio, IMUs) Large Language Models, and LLM driven agent capable of navigating UI based on user goals.

Research Scientist Intern — Facebook
Remote — Aug 2020 – Dec 2020
Conducting research on Continual Learning for Task-Oriented Dialogue Systems. I proposed a large scale benchmark plus a novel algorithm for the task.

Data Science Intern — UberAI
San Francisco, CA — Jun 2019 – Sept 2019
Conducting research on text-based games (i.e. TextWorld), using reinforcement learning (RL) algorithms, and on controllable language generation.

Research Assistant — HKUST
Hong Kong, HK — Sept 2017 – Sept 2018
Conducting research on deep learning algorithms. I mainly worked on building end-to-end architectures to model dialogue responses.

EDUCATION

The Hong Kong University of Science and Technology, Hong Kong
Ph.D. in Electronic & Computer Engineering, Sept 2018 - Nov 2021 — GPA: 4.3/4.3

University of Pisa, Italy
Master's Degree in Computer Science, 2015 - 2017 — Final mark: 110/110 (Honours)

University of Perugia, Italy
B.Sc. in Computer Science, 2011 - 2014 — Final mark: 110/110 (Honours)

PROFESSIONAL ACTIVITY

General Chair   ACL Student Research Workshop (SRW) 2022.

Area Chair   ACL Rolling Review (ARR) 22-23, AACL 22, EACL 22, ACL 23.

Tutorial   presenter at NeurIPS 2020. Title: "Deeper Conversational AI".

Reviewer   NAACL 2019, EMNLP 2019, ACL 2019, AAAI 2020, ACL 2020, EMNLP 2020, ICLR 2020, NeurIPS 2020, AAAI 2021, ICML 2021, NAACL 2021, ACL 2021, EMNLP 2021, NeurIPS 2021, AAAI 2022, ICLR 2022, ICLR 2023, ICML 2023, NeurIPS 2023, ICLR 2023.

AWARD

Outstanding Paper Award ACL 2019   (5 papers were selected out of 2905 submissions) for Transferable Multi-Domain State Generator for Task-Oriented Dialogue Systems.

Best Paper Award ConvAI-NeurIPS 2019   for Attention Over Paramters for Dialogue Systems.

PhD Award 2019-20   School of Engineering (SENG) Academic Award for PhD Students.

MEDIA COVERAGE

MIT-Technology Review   for the paper: Plug and Play Language Models: a Simple Approach to Controlled Text Generation. Link: Article.

Venture Beats   for the paper: Plug and Play Language Models: a Simple Approach to Controlled Text Generation. Link: Article.

Venture Beats for the paper: Exploration Based Language Learning for Text-Based Games. Link: Article.

SELECTED PUBLICATIONS

[**Arvix2023**] **Andrea Madotto**, Seungwhan Moon, Zhaojiang Lin, Tushar Nagarajan, Matt Smith, Shashank Jain, Chun-Fu Yeh, Prakash Murugesan, Peyman Heidari, Yue Liu, Kavya Srinet, Babak Damavandi, and Anuj Kumar. AnyMAL: An Efficient and Scalable Any-Modality Augmented Language Model.

[**ACM Computing Surveys**] Ziwei Ji, Nayeon Lee, Rita Frieske, Tiezheng Yu, Dan Su, Yan Xu, Etsuko Ishii, Ye Jin Bang, Pascale Fung and **Andrea Madotto**. Survey of hallucination in natural language generation. ACM Computing Surveys 2023, https://doi.org/10.1145/3571730.

[**EMNLP2021**] **Andrea Madotto**, Zhaojiang Lin, Zhenpeng Zhou, Seungwhan Moon, Paul Crook, Bing Liu, Zhou Yu, Eunjoon Cho, Zhiguang Wang, Pascale Fung. Continual Learning in Task-Oriented Dialogue Systems. EMNLP 2021 (Oral).

[**EMNLP2021**] **Andrea Madotto**, Zhaojiang Lin, Zhenpeng Zhou, Seungwhan Moon, Paul Crook, Bing Liu, Zhou Yu, Eunjoon Cho, Zhiguang Wang, Pascale Fung. Continual Learning in Task-Oriented Dialogue Systems. EMNLP 2021 (Oral).

[**AAAI2021-Demo**] **Andrea Madotto**, Zhaojiang Lin, Yejin Bang, Pascale Fung. The Adapter-Bot: All-In-One Controllable Conversational Model. AAAI 2021 Demo.

[**EMNLP2020-Findings**] **Andrea Madotto**, Etsuko Ishii, Zhaojiang Lin, Sumanth Dathathri, Pascale Fung. Plug-and-Play Conversational Models. EMNLP 2020 Findings.

[**EMNLP2020-Findings**] **Andrea Madotto**, Samuel Cahyawijaya, Genta Indra Winata, Yan Xu, Zihan Liu, Zhaojiang Lin, Pascale Fung. Learning Knowledge Bases with Parameters for Task-Oriented Dialogue Systems. EMNLP 2020 Findings.

[**EMNLP2020**] Zhaojiang Lin, **Andrea Madotto**, Genta Indra Winata, Pascale Fung. Mintl: Minimalist transfer learning for task-oriented dialogue systems. EMNLP 2020 (Oral).

[**ICLR2020**] Sumanth Dathathri, **Andrea Madotto**, Janice Lan, Jane Hung, Eric Frank, Piero Molino, Jason Yosinski, Rosanne Liu. Plug and Play Language Models: a Simple Approach to Controlled Text Generation. ICLR 2020 (Oral).

[**IJCAI2020**] **Andrea Madotto**, Mahdi Namazifar, Joost Huizinga, Piero Molino, Adrien Ecoffet, Huaixiu Zheng, Alexandros Papangelis, Dian Yu, Chandra Khatri, Gokhan Tu. Exploration Based Language Learning for Text-Based Games. IJCAI 2020 (Oral).

[**NeurIPS-ConvAI**] **Andrea Madotto**, Zhaojiang Lin, Chien-Sheng Wu, Jamin Shin, Pascale Fung. Attention over Parameters for Dialogue Systems. NeurIPS-ConvAI Workshop 2019, **Oral and Best Paper Award**.

[**EMNLP2019**] **Andrea Madotto**, Zhaojiang Lin, Jamin Shin, Peng Xu and Pascale Fung. MoEL: Mixture of Empathetic Listeners. EMNLP 2019 (Oral).

[**ACL2019**] Chien-Sheng Wu, **Andrea Madotto**, Ehsan Hosseini-Asl, Caiming Xiong, Richard Socher, Pascale Fung. Transferable Multi-Domain State Generator for Task-Oriented Dialogue Systems. ACL 2019, **Outstanding Paper Award (5 papers were selected out of 2905 submissions)**.

[**ACL2018**] **Andrea Madotto**, Chien-Sheng Wu, Pascale Fung. Mem2Seq: Effectively Incorporating Knowledge Bases into End-to-End Task-Oriented Dialog Systems. ACL 2018.

Full list available in Google Scholar or my personal website.

LANGUAGE SKILLS

Languages: Italian (mother tongue) • English (Full-Proficiency)• Chinese (basic)