

Fei Liu | Résumé

Ph.D. (Natural Language Processing, Deep Learning)

Senior Research Scientist at Google (Gemini/Bard LLM)

Research experience at leading industry labs (Facebook AI Research and NAVER LABS)

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Experience

Google

Mountain View, CA, USA

Senior Research Scientist

May, 2020–Present

Main Focus: Gemini/Bard, LLM, RLHF, neural semantic parsing, continual learning

Facebook AI Research

Seattle, WA, USA

Research Intern

Sept, 2018–Jan, 2019

Research Topic and Achievements: Coreference resolution, memory-enhanced deep learning models, paper published at ACL 2019

Xerox Research Centre Europe (now NAVER LABS Europe)

Grenoble, France

Research Intern

May, 2016–Oct, 2016

Research Topic and Achievements: Memory Networks, deep learning approach for personality trait recognition, 3 papers published at EACL 2017

Hitachi Government & Public Corporation System Engineering, Ltd.

Tokyo, Japan

Software Engineer (Full-Time)

Oct, 2008–June, 2012

- Core developer in *GOOD-DESIGN-AWARD*-winning and *KIDS-DESIGN-AWARD*-winning accessibility tool *ZoomSight* (No.1 in market share)

Selected Publications

Fei Liu as core contributor, *et al.* Gemini: A Family of Highly Capable Multimodal Models. In Gemini technical report: <https://goo.gle/GeminiPaper> and arXiv: <https://arxiv.org/abs/2312.11805>, 2023.

William Held, Christopher Hidey, **Fei Liu**, Eric Zhu, Rahul Goel, Diyi Yang, and Rushin Shah. DAMP: Doubly Aligned Multilingual Parser for Task-Oriented Dialogue. In *Proceedings of the 61st Annual Meeting of the Association for Computational Linguistics (ACL 2023)*, pages 3586–3604, Toronto, Canada, 2023.

Christopher Hidey, **Fei Liu**, Rahul Goel. Reducing Model Churn: Stable Re-training of Conversational Agents. In *Proceedings of the 23rd Annual Meeting of the Special Interest Group on Discourse and Dialogue*, pages 14–25, Edinburgh, UK, 2022. **Best Paper Award**

Fei Liu, Luke Zettlemoyer, and Jacob Eisenstein. The Referential Reader: A Recurrent Entity Network for Anaphora Resolution. In *Proceedings of the 57th Annual Meeting of the Association for Computational Linguistics (ACL 2019)*, pages 5918–5925, Florence, Italy, 2019.

Minghao Wu, **Fei Liu**, and Trevor Cohn. Evaluating the Utility of Hand-crafted Features in Sequence Labelling. In *Proceedings of the 2018 Conference on Empirical Methods in Natural Language Processing (EMNLP 2018)*, pages 2850–2856, Brussels, Belgium, 2018.

Fei Liu, Trevor Cohn, and Timothy Baldwin. Narrative Modeling with Memory Chains and Semantic Supervision. In *Proceedings of the 56th Annual Meeting of the Association for Computational Linguistics (ACL 2018)*, pages 278–284, Melbourne, Australia, 2018.

Fei Liu, Trevor Cohn, and Timothy Baldwin. Recurrent Entity Networks with Delayed Memory Update for Targeted Aspect-based Sentiment Analysis. In *Proceedings of the 2018 Conference of the North American Chapter of the Association for Computational Linguistics – Human Language Technologies (NAACL HLT 2018)*, pages 278–283, New Orleans, USA, 2018.

Fei Liu, Trevor Cohn, and Timothy Baldwin. Improving End-to-End Memory Networks with Unified Weight Tying. In *Proceedings of the 15th Annual Workshop of The Australasian Language Technology Association (ALTW 2017)*, pages 16–24, Brisbane, Australia, 2017. **Best Post Award**

Fei Liu, Timothy Baldwin, and Trevor Cohn. Capturing Long-range Contextual Dependencies with Memory-enhanced Conditional Random Fields. In *Proceedings of the 8th International Joint Conference on Natural Language Processing (IJCNLP 2017)*, pages 555–565, Taipei, Taiwan, 2017.

Fei Liu and Julien Perez. Gated End-to-End Memory Networks. In *Proceedings of the 15th Conference of the European Chapter of the Association for Computational Linguistics (EACL 2017, also presented at NIPS 2016 Let’s Discuss: Learning Methods for Dialogue workshop)*, pages 1–10, Valencia, Spain, 2017.

Fei Liu, Julien Perez, and Scott Nowson. A Language-independent and Compositional Model for Personality Trait Recognition from Short Texts. In *Proceedings of the 15th Conference of the European Chapter of the Association for Computational Linguistics (EACL 2017)*, pages 754–764, Valencia, Spain, 2017.

Julien Perez and **Fei Liu**. Dialog State Tracking, A Machine Reading Approach using Memory Network. In *Proceedings of the 15th Conference of the European Chapter of the Association for Computational Linguistics (EACL 2017)*, pages 305–314, Valencia, Spain, 2017.

Fei Liu, Alistair Moffat, Timothy Baldwin, and Xiuzhen Zhang. Quit While Ahead: Evaluating Truncated Rankings. In *Proceedings of 39th International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR 2016)*, pages 953–956, Pisa, Italy, 2016.

Education

The University of Melbourne

Doctor of Philosophy

Natural Language Processing, Deep Learning

Melbourne, Australia

Feb, 2015–Feb, 2020

The University of Melbourne

Master of Software Systems Engineering, First Class Honours

Melbourne, Australia

July, 2012–July, 2013

Beijing University of Technology

Bachelor of Computer Science and Technology

Beijing, China

Sept, 2004–July, 2008

Awards and Additional Certificates

Best Paper Award

Annual Meeting of the Special Interest Group on Discourse and Dialogue

Edinburgh, UK

Sept, 2022

Best Short Paper Award <i>ACM SIGIR International Conference on the Theory of Information Retrieval</i>	Tianjin, China <i>Sept, 2018</i>
Best Poster Award <i>Australasian Language Technology Association</i>	Brisbane, Australia <i>Dec, 2017</i>
ALTA 2017 Student Scholarship <i>Australasian Language Technology Association</i>	Brisbane, Australia <i>Nov, 2017</i>
Google PhD Travel Scholarship Award <i>Google</i>	Melbourne, Australia <i>Oct, 2017</i>
Best Paper Award, 5th Annual Doctoral Colloquium <i>Sch. of Computing and Information Systems, The University of Melbourne</i>	Melbourne, Australia <i>July, 2017</i>
Conference Travel Scholarship <i>The University of Melbourne</i>	Melbourne, Australia <i>April, 2017</i>
Winning Team of Electronic Trading Challenge Hackathon <i>Jane Street Capital</i>	Melbourne, Australia <i>Mar, 2017</i>
Best Intern Presentation Award <i>Xerox Research Centre Europe</i>	Grenoble, France <i>Sept, 2016</i>
SIGIR Travel Scholarship <i>ACM SIGIR Conference on Research and Development in Information Retrieval</i>	Pisa, Italy <i>July, 2016</i>
3rd Prize, Microsoft Data Science Student Challenge Hackathon <i>Microsoft, The University of Melbourne</i>	Melbourne, Australia <i>May, 2016</i>
Australian Postgraduate Awards (APA Scholarship) <i>Department of Education, Australian Government</i>	Melbourne, Australia <i>Feb, 2015–May, 2019</i>
IELTS <i>General Training, Overall: 8.5/9.0</i> <i>Listening: 8.5/9.0, Reading: 9.0/9.0, Writing: 8.5/9.0, Speaking: 7.0/9.0</i>	Melbourne, Australia <i>Mar, 2013</i>

Patents

Julien Perez, Scott Nowson, and **Fei Liu**. Author personality trait recognition from short texts with a deep compositional learning approach. US10049103B2 (granted).

Languages

<u>Name</u>	<u>Proficiency</u>
Chinese	Native Proficiency
English	Full Professional Proficiency
Japanese	Full Professional Proficiency

Misc

- Primary language: Python, Java
- Knowledge of: TensorFlow, PyTorch, \LaTeX , Linux
- Google Scholar: <https://bit.ly/2TxSU7e>
- GitHub: <https://github.com/liuflly>
- Reviewer for: EMNLP 2017, 2018, 2019; CoNLL 2018; NAACL 2019; ACL 2019, 2020