

Fei Liu | Resumé

Ph.D. Candidate (Natural Language Processing, Deep Learning)
Research experience at leading industry labs (Facebook AI Research and NAVER LABS)
Supervisors: Tim Baldwin, Trevor Cohn
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Australian citizen, eligible for U.S. E-3 work visa

Education

The University of Melbourne <i>Doctor of Philosophy</i> Natural Language Processing, Deep Learning	Melbourne, Australia Feb, 2015–Present
The University of Melbourne <i>Master of Software Systems Engineering, First Class Honours</i>	Melbourne, Australia July, 2012–July, 2013
Beijing University of Technology <i>Bachelor of Computer Science and Technology</i>	Beijing, China Sept, 2004–July, 2008

Selected Publications

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.

Experience

Facebook AI Research

Research Intern

Seattle, USA

Sept, 2018–Jan, 2019

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

The University of Melbourne

Research Assistant (Casual)

Melbourne, Australia

May, 2017–Aug, 2017

Research Duties: Responsible for implementing a bi-directional LSTM-CRF model for sequential tagging tasks in low-resource languages for the DARPA-funded LORELEI project in collaboration with CMU.

Xerox Research Centre Europe (now NAVER LABS Europe)

Research Intern

Grenoble, France

May, 2016–Oct, 2016

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

Royal Melbourne Institute of Technology

Research Assistant (Casual)

Melbourne, Australia

Sept, 2014–Feb, 2015

Detailed Achievements:

- Sept 2014 – Feb 2015 *Customized Search Engine for Industry Partner*
Managed to increase the accuracy of the query boundary detection process by 10% by applying machine learning techniques. Significantly improved the performance of the search engine (F-score from less than 10 to 55 by boosting precision substantially and factoring in translation probabilities to detect paraphrases).

The University of Melbourne

Research Assistant (Casual)

Melbourne, Australia

Sept, 2014–Dec, 2014

Hitachi Government & Public Corporation System Engineering, Ltd.

Software Engineer (Full-Time)

Tokyo, Japan

Oct, 2008–June, 2012

- Participated (as a core developer) in the development of the *GOOD-DESIGN-AWARD*-winning and *KIDS-DESIGN-AWARD*-winning accessibility tool *ZoomSight* (No.1 in market share), a Japanese NLP web application for the vision impaired, capable of adding phonetic scripts to and reading the contents of HTML pages

Awards and Additional Certificates

Best Short Paper Award

ACM SIGIR International Conference on the Theory of Information Retrieval

Tianjin, China

Sept, 2018

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> Listening: 8.5/9.0, Reading: 9.0/9.0, Writing: 8.5/9.0, Speaking: 7.0/9.0	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).

Julien Perez, **Fei Liu**, and Scott Nowson. Gated end-to-end memory networks. US20180232152A1 (application).

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, Keras, PyTorch, \LaTeX , Linux
- Google Scholar: <https://bit.ly/2TxSU7e>
- GitHub: <https://github.com/liufly>
- Reviewer for: EMNLP 2017, 2018, 2019; CoNLL 2018; NAACL 2019; ACL 2019, 2020