

# SHAOJIE JIANG

Senior Machine Learning Scientist

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*I am a Senior Machine Learning Scientist at Huawei R&D Center Amsterdam. I work on training Huawei's ChatGPT models, and am responsible for the Reinforcement Learning algorithm development and model training. More broadly, my work involves chatbots, information retrieval and conversational QA systems. In parallel, I am completing my PhD at the University of Amsterdam. I have interned at Replika.ai and Amazon.com.*

## EDUCATION

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|----------------|---|
| 2017 - present | University of Amsterdam, The Netherlands<br>PhD Candidate<br>Research area: <i>Open-domain Dialogue Systems</i><br>Supervisors: Prof. dr. Maarten de Rijke & Dr. Svitlana Vakulenko<br>Thesis plan: Expected to finish by June 2023 |
| 2014 - 2017    | Northwest A&F University, Yangling, China<br>Master of Engineering<br>Thesis: <i>Research on Feature Representation and Optimization Methods in Structured Object Tracking</i><br>Supervisor: Prof. Jifeng Ning                     |
| 2010 - 2014    | Northwest A&F University, Yangling, China<br>Bachelor of Engineering<br>Thesis: <i>Implementation of Single Image Haze Removal Using Dark Channel Prior</i><br>Advisors: Dr. Yaojun Geng and Prof. Jifeng Ning                      |

## WORKING EXPERIENCE

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|-------------------|--|
| 2022.07 - present | <b>Huawei R&amp;D Center</b> , Amsterdam, the Netherlands<br>Senior Machine Learning Scientist<br>Area: ChatGPT, Chatbots and Conversational QA Systems<br>Responsibility: <ul style="list-style-type: none"><li>• Reward model and PPO algorithm development and model training (core of the ChatGPT model)</li><li>• Designer and main contributor of Chair, a research toolkit in Python (70% of commits), which is capable of training SFT, RM, and PPO models through one line of command</li></ul> |
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- Lead of **ChatEval** challenge project at **DSTC 11**
- Contact person of the Conversational AI project
- Contact person of **DReaMS Lab** work package 3

2021.02 - 2021.07 **Replika**, San Francisco, USA  
 NLP Research Intern  
 Project: Improving Generative Dialogue Engagingness  
 Team: AI Research Team  
 Mentor: Artem Rodichev  
 Outcome: A chatbot model with improved engagingness, and a follow-up research paper accepted at CHIIR 2023 (see below)

2020.07 - 2020.09 **Amazon.com**, Inc., Amsterdam, The Netherlands  
 Applied Science Intern on NLP  
 Project: Customer Review Summarisation  
 Team: Subjective NLP  
 Mentor: Alex Klementiev  
 Outcome: An automatic aspect extraction system for customer reviews

## PUBLICATIONS

**Shaojie Jiang**, Ruqing Zhang, Svitlana Vakulenko, and Maarten de Rijke. “A Simple Contrastive Learning Objective for Alleviating Neural Text Degeneration.” Under review at the TOIS journal.

**Shaojie Jiang**, Svitlana Vakulenko, and Maarten de Rijke. “Weakly Supervised Turn-level Engagingness Evaluator for Dialogues.” To appear in CHIIR 2023 as a full paper. Source code link below (Lit-Seq).

**Shaojie Jiang**, Ruqing Zhang, Svitlana Vakulenko, and Maarten de Rijke. “A Simple Contrastive Learning Objective for Alleviating Neural Text Degeneration.” arXiv preprint arXiv:2205.02517. 2022. Source code link below (Lit-Seq).

**Shaojie Jiang**, Thomas Wolf, Christof Monz, and Maarten de Rijke. “TLDR: Token Loss Dynamic Reweighting for Reducing Repetitive Utterance Generation.” arXiv preprint arXiv:2003.11963. 2020. Source code link below (TLDR).

**Shaojie Jiang**, Pengjie Ren, Christof Monz, and Maarten de Rijke. “Improving Neural Response Diversity with Frequency-Aware Cross-Entropy Loss.” In The World Wide Web Conference, pp. 2879-2885. ACM, 2019. Source code link below (FACE).

**Shaojie Jiang**, and Maarten de Rijke. “Why are Sequence-to-Sequence Models So Dull? Understanding the Low-Diversity Problem of Chatbots.”

In Proceedings of the 2018 EMNLP Workshop SCAI: The 2nd International Workshop on Search-Oriented Conversational AI, pp. 81-86. 2018.

**Shaojie Jiang**, Jifeng Ning, Cheng Cai, and Yunsong Li. “Robust Struck tracker via color Haar-like feature and selective updating.” *Signal, Image and Video Processing* 11, no. 6 (2017): 1073-1080.

Jifeng Ning, Jimei Yang, **Shaojie Jiang**, Lei Zhang, and Ming-Hsuan Yang. “Object tracking via dual linear structured SVM and explicit feature map.” In Proceedings of the IEEE conference on computer vision and pattern recognition, pp. 4266-4274. 2016.

#### OPEN SOURCE CONTRIBUTIONS

Lit-Seq project      <https://github.com/ShaojieJiang/lit-seq>  
TLDR project      <https://github.com/ShaojieJiang/tldr>  
FACE project      <https://github.com/ShaojieJiang/FACE>

#### AWARDS

2019	Invited by NLP Summit at Google Zurich
2018	Student Travel Grant for the 2nd SCAI Workshop
2017	Faculty Outstanding Master Thesis Award
2013	National Endeavor Scholarship
2012	National Endeavor Scholarship

#### TEACHING AND SUPERVISION

2021.02 - 2020.03	Teaching Assistant for Master AI course Information Retrieval 1
2019.11 - 2020.06	Master AI Thesis Supervision: Traian Vidraşcu, “Link Prediction for Software Graphs using Inbound and Outbound Neighborhoods”
2019.11 - 2020.06	Master AI Thesis Supervision: Kai Liang, “Neural Hierarchical Text Classification with Transfer Learning Approaches”
2019.04 - 2019.07	Master Data Science Thesis Supervision: Savvina Daniil, “Training Support Vector Machines Using Multi-Party Computation”
2019.06 - 2019.06	Teaching Assistant for Master AI Project-AI course on “Repetition Reduction for Chatbots”
2018.10 - 2018.12	Teaching Assistant for Master AI course Information Retrieval 2 on “Hierarchical Neural Response Generation”

2018.01 - 2018.06    Master AI Thesis Supervision: Ricardo Fabián Guevara Meléndez, *"Task-Oriented Dialog Agents Using Memory-Networks and Ensemble Learning"*

## COMMUNITY SERVICE

2022                      Reviewer of TOIS

2021                      Reviewer for JSCT and TALLIP

2020.02-2021.02       Member of PhD Council at the Informatics Institute of the University of Amsterdam

2020                      Reviewer for TOIS, ACL, EMNLP and EACL

2019.09-2020.11       Representative of Informatics Institute on PhD Council of the Faculty of Science of the University of Amsterdam

2019.03-2019.06       Subreviewer for SIGIR and CIKM

SKILLS                   Python, PyTorch, Git, Bash, LaTeX, Photography

## REFERENCES

**Prof. dr. Maarten de Rijke**    Distinguished University Professor AI & IR at University of Amsterdam, Director Innovation Center for Artificial Intelligence. Email: [m.deRijke@uva.nl](mailto:m.deRijke@uva.nl)

**Dr. Jun Luo**                      Machine Translation team lead at Huawei R&D Center Amsterdam. Email: [junluo@huawei.com](mailto:junluo@huawei.com)

June 29, 2023