

References

- Yupeng Chang, Xu Wang, Jindong Wang, Yuan Wu, Linyi Yang, Kaijie Zhu, Hao Chen, Xiaoyuan Yi, Cunxiang Wang, Yidong Wang, et al. 2024. A survey on evaluation of large language models. *ACM Transactions on Intelligent Systems and Technology*, 15(3):1–45.
- Jianlin Chen. 2024. Lmstyle benchmark: Evaluating text style transfer for chatbots. *arXiv preprint arXiv:2403.08943*.
- Yanda Chen, Chen Zhao, Zhou Yu, Kathleen McKeown, and He He. 2023. On the relation between sensitivity and accuracy in in-context learning. In *Findings of the Association for Computational Linguistics: EMNLP 2023*, pages 155–167, Singapore. Association for Computational Linguistics.
- Yung-Sung Chuang, Yujia Xie, Hongyin Luo, Yoon Kim, James R Glass, and Pengcheng He. 2024. Dola: Decoding by contrasting layers improves factuality in large language models. In *The Twelfth International Conference on Learning Representations*.
- Daryna Dementieva, Daniil Moskovskiy, David Dale, and Alexander Panchenko. 2023. Exploring methods for cross-lingual text style transfer: The case of text detoxification. In *Proceedings of the 13th International Joint Conference on Natural Language Processing and the 3rd Conference of the Asia-Pacific Chapter of the Association for Computational Linguistics (Volume 1: Long Papers)*, pages 1083–1101, Nusa Dua, Bali. Association for Computational Linguistics.
- Maximilian Dreyer, Erblina Purelku, Johanna Vielhaben, Wojciech Samek, and Sebastian Lapuschkin. 2024. Pure: Turning polysemantic neurons into pure features by identifying relevant circuits. *arXiv preprint arXiv:2404.06453*.
- Fangxiaoyu Feng, Yinfei Yang, Daniel Cer, Naveen Arivazhagan, and Wei Wang. 2022. Language-agnostic BERT sentence embedding. In *Proceedings of the 60th Annual Meeting of the Association for Computational Linguistics (Volume 1: Long Papers)*, pages 878–891, Dublin, Ireland. Association for Computational Linguistics.
- Albert Garde, Esben Kran, and Fazl Barez. 2023. Deep-decipher: Accessing and investigating neuron activation in large language models. *arXiv preprint arXiv:2310.01870*.
- Zhiqiang Hu, Roy Ka-Wei Lee, Charu C Aggarwal, and Aston Zhang. 2022. Text style transfer: A review and experimental evaluation. *ACM SIGKDD Explorations Newsletter*, 24(1):14–45.
- Di Jin, Zhijing Jin, Zhiting Hu, Olga Vechtomova, and Rada Mihalcea. 2022. Deep learning for text style transfer: A survey. *Computational Linguistics*, 48(1):155–205.
- Takeshi Kojima, Itsuki Okimura, Yusuke Iwasawa, Hitomi Yanaka, and Yutaka Matsuo. 2024. On the multi-lingual ability of decoder-based pre-trained language models: Finding and controlling language-specific neurons. *arXiv preprint arXiv:2404.02431*.
- Wen Lai, Alexandra Chronopoulou, and Alexander Fraser. 2022a. m⁴ adapter: Multilingual multi-domain adaptation for machine translation with a meta-adapter. In *Findings of the Association for Computational Linguistics: EMNLP 2022*, pages 4282–4296, Abu Dhabi, United Arab Emirates. Association for Computational Linguistics.
- Wen Lai, Alexandra Chronopoulou, and Alexander Fraser. 2023a. Mitigating data imbalance and representation degeneration in multilingual machine translation. In *Findings of the Association for Computational Linguistics: EMNLP 2023*, pages 14279–14294, Singapore. Association for Computational Linguistics.
- Wen Lai, Viktor Hangya, and Alexander Fraser. 2023b. Extending multilingual machine translation through imitation learning. *arXiv preprint arXiv:2311.08538*.
- Wen Lai, Jindřich Libovický, and Alexander Fraser. 2022b. Improving both domain robustness and domain adaptability in machine translation. In *Proceedings of the 29th International Conference on Computational Linguistics*, pages 5191–5204, Gyeongju, Republic of Korea. International Committee on Computational Linguistics.
- Kenneth Li, Oam Patel, Fernanda Viégas, Hanspeter Pfister, and Martin Wattenberg. 2024. Inference-time intervention: Eliciting truthful answers from a language model. *Advances in Neural Information Processing Systems*, 36.
- Xiang Lisa Li, Ari Holtzman, Daniel Fried, Percy Liang, Jason Eisner, Tatsunori Hashimoto, Luke Zettlemoyer, and Mike Lewis. 2023. Contrastive decoding: Open-ended text generation as optimization. In *Proceedings of the 61st Annual Meeting of the Association for Computational Linguistics (Volume 1: Long Papers)*, pages 12286–12312, Toronto, Canada. Association for Computational Linguistics.
- Qingyi Liu, Jinghui Qin, Wenxuan Ye, Hao Mou, Yuxuan He, and Keze Wang. 2024. Adaptive prompt routing for arbitrary text style transfer with pre-trained language models. In *Proceedings of the AAAI Conference on Artificial Intelligence*, volume 38, pages 18689–18697.
- Varvara Logacheva, Daryna Dementieva, Sergey Ustyantsev, Daniil Moskovskiy, David Dale, Irina Krotova, Nikita Semenov, and Alexander Panchenko. 2022. ParaDetox: Detoxification with parallel data. In *Proceedings of the 60th Annual Meeting of the Association for Computational Linguistics (Volume 1: Long Papers)*, pages 6804–6818, Dublin, Ireland. Association for Computational Linguistics.

- Guoqing Luo, Yu Han, Lili Mou, and Mauajama Firdaus. 2023. [Prompt-based editing for text style transfer](#). In *Findings of the Association for Computational Linguistics: EMNLP 2023*, pages 5740–5750, Singapore. Association for Computational Linguistics.
- Aman Madaan, Amrith Setlur, Tanmay Parekh, Barnabas Poczos, Graham Neubig, Yiming Yang, Ruslan Salakhutdinov, Alan W Black, and Shrimai Prabhmoye. 2020. [Politeness transfer: A tag and generate approach](#). In *Proceedings of the 58th Annual Meeting of the Association for Computational Linguistics*, pages 1869–1881, Online. Association for Computational Linguistics.
- Huiyu Mai, Wenhao Jiang, and Zhihong Deng. 2023. Prefix-tuning based unsupervised text style transfer. *arXiv preprint arXiv:2310.14599*.
- ML Menéndez, JA Pardo, L Pardo, and MC Pardo. 1997. The jensen-shannon divergence. *Journal of the Franklin Institute*, 334(2):307–318.
- Meta. 2024. Introducing meta llama 3: The most capable openly available llm to date. <https://ai.meta.com/blog/meta-llama-3/>.
- Shervin Minaee, Tomas Mikolov, Narjes Nikzad, Meysam Chenaghlu, Richard Socher, Xavier Amatriain, and Jianfeng Gao. 2024. Large language models: A survey. *arXiv preprint arXiv:2402.06196*.
- Ari Morcos and David Barrett. 2018. Understanding deep learning through neuron deletion. Google Deepmind Blog. <Https://deepmind.google/discover/blog/understanding-deep-learning-through-neuron-deletion>.
- Sourabrata Mukherjee, Akanksha Bansal, Atul Kr Ojha, John P McCrae, and Ondřej Dušek. 2024a. Text detoxification as style transfer in english and hindi. *arXiv preprint arXiv:2402.07767*.
- Sourabrata Mukherjee, Atul Kr Ojha, Akanksha Bansal, Deepak Alok, John P McCrae, and Ondřej Dušek. 2024b. Multilingual text style transfer: Datasets & models for indian languages. *arXiv preprint arXiv:2405.20805*.
- Sourabrata Mukherjee, Atul Kr. Ojha, and Ondřej Dušek. 2024c. Are large language models actually good at text style transfer? *arXiv preprint arXiv:2406.05885*.
- Jingcheng Niu, Andrew Liu, Zining Zhu, and Gerald Penn. 2024. What does the knowledge neuron thesis have to do with knowledge? *arXiv preprint arXiv:2405.02421*.
- Phil Ostheimer, Mayank Nagda, Marius Kloft, and Sophie Fellenz. 2023. Text style transfer evaluation using large language models. *arXiv preprint arXiv:2308.13577*.
- Lei Pan, Yunshi Lan, Yang Li, and Weining Qian. 2024. Unsupervised text style transfer via llms and attention masking with multi-way interactions. *arXiv preprint arXiv:2402.13647*.
- Alec Radford, Jeffrey Wu, Rewon Child, David Luan, Dario Amodei, Ilya Sutskever, et al. 2019. Language models are unsupervised multitask learners. *OpenAI blog*, 1(8):9.
- Sudha Rao and Joel Tetreault. 2018. Dear sir or madam, [may I introduce the GYAFc dataset: Corpus, benchmarks and metrics for formality style transfer](#). In *Proceedings of the 2018 Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies, Volume 1 (Long Papers)*, pages 129–140, New Orleans, Louisiana. Association for Computational Linguistics.
- Tal Schuster, Adam Fisch, Jai Gupta, Mostafa Dehghani, Dara Bahri, Vinh Tran, Yi Tay, and Donald Metzler. 2022. Confident adaptive language modeling. *Advances in Neural Information Processing Systems*, 35:17456–17472.
- Thibault Sellam, Dipanjan Das, and Ankur Parikh. 2020. [BLEURT: Learning robust metrics for text generation](#). In *Proceedings of the 58th Annual Meeting of the Association for Computational Linguistics*, pages 7881–7892, Online. Association for Computational Linguistics.
- Noam Shazeer. 2020. Glu variants improve transformer. *arXiv preprint arXiv:2002.05202*.
- Tianxiao Shen, Tao Lei, Regina Barzilay, and Tommi Jaakkola. 2017. Style transfer from non-parallel text by cross-alignment. *Advances in neural information processing systems*, 30.
- Shaomu Tan, Di Wu, and Christof Monz. 2024. Neuron specialization: Leveraging intrinsic task modularity for multilingual machine translation. *arXiv preprint arXiv:2404.11201*.
- Tianyi Tang, Wenyang Luo, Haoyang Huang, Dongdong Zhang, Xiaolei Wang, Xin Zhao, Furu Wei, and Ji-Rong Wen. 2024. Language-specific neurons: The key to multilingual capabilities in large language models. *arXiv preprint arXiv:2402.16438*.
- Curt Tigges, Oskar John Hollinsworth, Atticus Geiger, and Neel Nanda. 2023. Linear representations of sentiment in large language models. *arXiv preprint arXiv:2310.15154*.
- Hugo Touvron, Louis Martin, Kevin Stone, Peter Albert, Amjad Almahairi, Yasmine Babaei, Nikolay Bashlykov, Soumya Batra, Prajjwal Bhargava, Shruti Bhosale, et al. 2023. Llama 2: Open foundation and fine-tuned chat models. *arXiv preprint arXiv:2307.09288*.

Ashish Vaswani, Noam Shazeer, Niki Parmar, Jakob Uszkoreit, Llion Jones, Aidan N Gomez, Łukasz Kaiser, and Illia Polosukhin. 2017. Attention is all you need. *Advances in neural information processing systems*, 30.

Rob Voigt, David Jurgens, Vinodkumar Prabhakaran, Dan Jurafsky, and Yulia Tsvetkov. 2018. **RtGender: A corpus for studying differential responses to gender**. In *Proceedings of the Eleventh International Conference on Language Resources and Evaluation (LREC 2018)*, Miyazaki, Japan. European Language Resources Association (ELRA).

Hanyu Wang, Pengxiang Wu, Kevin Dela Rosa, Chen Wang, and Abhinav Shrivastava. 2024. Multimodality-guided image style transfer using cross-modal gan inversion. In *Proceedings of the IEEE/CVF Winter Conference on Applications of Computer Vision*, pages 4976–4985.

Xiaozhi Wang, Kaiyue Wen, Zhengyan Zhang, Lei Hou, Zhiyuan Liu, and Juanzi Li. 2022. **Finding skill neurons in pre-trained transformer-based language models**. In *Proceedings of the 2022 Conference on Empirical Methods in Natural Language Processing*, pages 11132–11152, Abu Dhabi, United Arab Emirates. Association for Computational Linguistics.

Xiongye Xiao, Chenyu Zhou, Heng Ping, Defu Cao, Yaxing Li, Yizhuo Zhou, Shixuan Li, and Paul Bogdan. 2024. Exploring neuron interactions and emergence in llms: From the multifractal analysis perspective. *arXiv preprint arXiv:2402.09099*.

Wei Xu, Alan Ritter, Bill Dolan, Ralph Grishman, and Colin Cherry. 2012. **Paraphrasing for style**. In *Proceedings of COLING 2012*, pages 2899–2914, Mumbai, India. The COLING 2012 Organizing Committee.

Shangshang Yang, Xiaoshan Yu, Ye Tian, Xueming Yan, Haiping Ma, and Xingyi Zhang. 2024. Evolutionary neural architecture search for transformer in knowledge tracing. *Advances in Neural Information Processing Systems*, 36.

Chiyu Zhang, Honglong Cai, Yuexin Wu, Le Hou, Muhammad Abdul-Mageed, et al. 2024. Distilling text style transfer with self-explanation from llms. *arXiv preprint arXiv:2403.01106*.

Yiran Zhao, Wenxuan Zhang, Guizhen Chen, Kenji Kawaguchi, and Lidong Bing. 2024. How do large language models handle multilingualism? *arXiv preprint arXiv:2402.18815*.