

- janus. Mysteries of mode collapse, 2022. URL <https://www.lesswrong.com/posts/t9svvNPNmFf5Qa3TA/mysteries-of-mode-collapse>.
- Natasha Jaques, Shixiang Gu, Dzmitry Bahdanau, José Miguel Hernández-Lobato, Richard E. Turner, and Douglas Eck. Sequence tutor: Conservative fine-tuning of sequence generation models with kl-control. In Doina Precup and Yee Whye Teh (eds.), *Proceedings of the 34th International Conference on Machine Learning, ICML 2017, Sydney, NSW, Australia, 6-11 August 2017*, volume 70 of *Proceedings of Machine Learning Research*, pp. 1645–1654. PMLR, 2017. URL <http://proceedings.mlr.press/v70/jaques17a.html>.
- Muhammad Khalifa, Hady Elsahar, and Marc Dymetman. A distributional approach to controlled text generation. In *9th International Conference on Learning Representations, ICLR 2021, Virtual Event, Austria, May 3-7, 2021*. OpenReview.net, 2021. URL <https://openreview.net/forum?id=jWkw45-9AbL>.
- Andreas Köpf, Yannic Kilcher, Dimitri von Rütte, Sotiris Anagnostidis, Zhi-Rui Tam, Keith Stevens, Abdullah Barhoum, Nguyen Minh Duc, Oliver Stanley, Richárd Nagyfi, Shahul ES, Sameer Suri, David Glushkov, Arnav Dantuluri, Andrew Maguire, Christoph Schuhmann, Huu Nguyen, and Alexander Mattick. OpenAssistant Conversations – Democratizing Large Language Model Alignment, 2023. URL <http://arxiv.org/abs/2304.07327>.
- Saurabh Kumar, Aviral Kumar, Sergey Levine, and Chelsea Finn. One solution is not all you need: Few-shot extrapolation via structured maxent RL. In Hugo Larochelle, Marc’Aurelio Ranzato, Raia Hadsell, Maria-Florina Balcan, and Hsuan-Tien Lin (eds.), *Advances in Neural Information Processing Systems 33: Annual Conference on Neural Information Processing Systems 2020, NeurIPS 2020, December 6-12, 2020, virtual*, 2020. URL <https://proceedings.neurips.cc/paper/2020/hash/5d151d1059a6281335a10732fc49620e-Abstract.html>.
- Jiwei Li, Michel Galley, Chris Brockett, Jianfeng Gao, and Bill Dolan. A diversity-promoting objective function for neural conversation models. In *Proceedings of the 2016 Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies*, pp. 110–119, San Diego, California, 2016. Association for Computational Linguistics. doi:10.18653/v1/N16-1014. URL <https://aclanthology.org/N16-1014>.
- Xuechen Li, Tianyi Zhang, Yann Dubois, Rohan Taori, Ishaan Gulrajani, Carlos Guestrin, Percy Liang, and Tatsunori B. Hashimoto. AlpacaEval: An automatic evaluator of instruction-following models. GitHub, 2023. URL [https://github.com/tatsu-lab/alpaca\\_eval](https://github.com/tatsu-lab/alpaca_eval).
- Hao Liu, Carmelo Sferrazza, and Pieter Abbeel. Chain of Hindsight Aligns Language Models with Feedback, 2023a. URL <http://arxiv.org/abs/2302.02676>.
- Siyang Liu, Sahand Sabour, Yinhe Zheng, Pei Ke, Xiaoyan Zhu, and Minlie Huang. Rethinking and refining the distinct metric. In *Proceedings of the 60th Annual Meeting of the Association for Computational Linguistics (Volume 2: Short Papers)*, pp. 762–770, Dublin, Ireland, 2022. Association for Computational Linguistics. doi:10.18653/v1/2022.acl-short.86. URL <https://aclanthology.org/2022.acl-short.86>.
- Yang Liu, Dan Iter, Yichong Xu, Shuohang Wang, Ruochen Xu, and Chenguang Zhu. G-Eval: NLG Evaluation using GPT-4 with Better Human Alignment, 2023b. URL <http://arxiv.org/abs/2303.16634>.
- Steven Loria. TextBlob: Simplified Text Processing — TextBlob 0.16.0 documentation, 2013. URL <https://textblob.readthedocs.io/en/dev/>.
- Rui Mao, Guanyi Chen, Xulang Zhang, Frank Guerin, and Erik Cambria. GPTEval: A Survey on Assessments of ChatGPT and GPT-4, 2023. URL <http://arxiv.org/abs/2308.12488>.
- Jacob Menick, Maja Trebacz, Vladimir Mikulik, John Aslanides, Francis Song, Martin Chadwick, Mia Glaese, Susannah Young, Lucy Campbell-Gillingham, Geoffrey Irving, and Nat McAleese. Teaching language models to support answers with verified quotes, 2022. URL <http://arxiv.org/abs/2203.11147>.

- Volodymyr Mnih, Adrià Puigdomènech Badia, Mehdi Mirza, Alex Graves, Timothy P. Lillicrap, Tim Harley, David Silver, and Koray Kavukcuoglu. Asynchronous methods for deep reinforcement learning. In Maria-Florina Balcan and Kilian Q. Weinberger (eds.), *Proceedings of the 33rd International Conference on Machine Learning, ICML 2016, New York City, NY, USA, June 19-24, 2016*, volume 48 of *JMLR Workshop and Conference Proceedings*, pp. 1928–1937. JMLR.org, 2016. URL <http://proceedings.mlr.press/v48/mnih16.html>.
- Reiichiro Nakano, Jacob Hilton, Suchir Balaji, Jeff Wu, Long Ouyang, Christina Kim, Christopher Hesse, Shantanu Jain, Vineet Kosaraju, William Saunders, Xu Jiang, Karl Cobbe, Tyna Eloundou, Gretchen Krueger, Kevin Button, Matthew Knight, Benjamin Chess, and John Schulman. WebGPT: Browser-assisted question-answering with human feedback, 2022. URL <http://arxiv.org/abs/2112.09332>.
- Ramesh Nallapati, Bowen Zhou, Cicero dos Santos, Çağlar Gulçehre, and Bing Xiang. Abstractive text summarization using sequence-to-sequence RNNs and beyond. In *Proceedings of the 20th SIGNLL Conference on Computational Natural Language Learning*, pp. 280–290, Berlin, Germany, 2016. Association for Computational Linguistics. doi:10.18653/v1/K16-1028. URL <https://aclanthology.org/K16-1028>.
- OpenAI. Introducing ChatGPT, 2022. URL <https://openai.com/blog/chatgpt>.
- OpenAI. GPT-4 Technical Report, 2023. URL <http://arxiv.org/abs/2303.08774>.
- Takayuki Osa, Voot Tangkaratt, and Masashi Sugiyama. Discovering Diverse Solutions in Deep Reinforcement Learning by Maximizing State-Action-Based Mutual Information, 2022. URL <http://arxiv.org/abs/2103.07084>.
- Long Ouyang, Jeff Wu, Xu Jiang, Diogo Almeida, Carroll L. Wainwright, Pamela Mishkin, Chong Zhang, Sandhini Agarwal, Katarina Slama, Alex Ray, John Schulman, Jacob Hilton, Fraser Kelton, Luke Miller, Maddie Simens, Amanda Askell, Peter Welinder, Paul Christiano, Jan Leike, and Ryan Lowe. Training language models to follow instructions with human feedback, 2022. URL <http://arxiv.org/abs/2203.02155>.
- Kishore Papineni, Salim Roukos, Todd Ward, and Wei-Jing Zhu. Bleu: a method for automatic evaluation of machine translation. In *Proceedings of the 40th Annual Meeting of the Association for Computational Linguistics*, pp. 311–318, Philadelphia, Pennsylvania, USA, 2002. Association for Computational Linguistics. doi:10.3115/1073083.1073135. URL <https://aclanthology.org/P02-1040>.
- Baolin Peng, Chunyuan Li, Pengcheng He, Michel Galley, and Jianfeng Gao. Instruction Tuning with GPT-4, 2023. URL <http://arxiv.org/abs/2304.03277>.
- Ethan Perez, Saffron Huang, Francis Song, Trevor Cai, Roman Ring, John Aslanides, Amelia Glaese, Nat McAleese, and Geoffrey Irving. Red teaming language models with language models. In *Proceedings of the 2022 Conference on Empirical Methods in Natural Language Processing*, pp. 3419–3448, Abu Dhabi, United Arab Emirates, 2022. Association for Computational Linguistics. URL <https://aclanthology.org/2022.emnlp-main.225>.
- Jack W. Rae, Sebastian Borgeaud, Trevor Cai, Katie Millican, Jordan Hoffmann, Francis Song, John Aslanides, Sarah Henderson, Roman Ring, Susannah Young, Eliza Rutherford, Tom Hennigan, Jacob Menick, Albin Cassirer, Richard Powell, George van den Driessche, Lisa Anne Hendricks, Maribeth Rauh, Po-Sen Huang, Amelia Glaese, Johannes Welbl, Sumanth Dathathri, Saffron Huang, Jonathan Uesato, John Mellor, Irina Higgins, Antonia Creswell, Nat McAleese, Amy Wu, Erich Elsen, Siddhant Jayakumar, Elena Buchatskaya, David Budden, Esme Sutherland, Karen Simonyan, Michela Paganini, Laurent Sifre, Lena Martens, Xiang Lorraine Li, Adhiguna Kuncoro, Aida Nematzadeh, Elena Gribovskaya, Domenic Donato, Angeliki Lazaridou, Arthur Mensch, Jean-Baptiste Lespiau, Maria Tsimpoukelli, Nikolai Grigorev, Doug Fritz, Thibault Sottiaux, Mantas Pajarskas, Toby Pohlen, Zhitao Gong, Daniel Toyama, Cyprien de Masson d’Autume, Yujia Li, Tayfun Terzi, Vladimir Mikulik, Igor Babuschkin, Aidan Clark, Diego de Las Casas, Aurelia Guy, Chris Jones, James Bradbury, Matthew Johnson, Blake Hechtman, Laura Weidinger, Iason Gabriel, William Isaac, Ed Lockhart, Simon Osindero, Laura Rimell, Chris Dyer, Oriol Vinyals, Kareem Ayoub, Jeff Stanway, Lorrayne Bennett, Demis Hassabis, Koray Kavukcuoglu,

- and Geoffrey Irving. Scaling Language Models: Methods, Analysis & Insights from Training Gopher, 2022. URL <http://arxiv.org/abs/2112.11446>.
- Rafael Rafailov, Archit Sharma, Eric Mitchell, Stefano Ermon, Christopher D. Manning, and Chelsea Finn. Direct Preference Optimization: Your Language Model is Secretly a Reward Model, 2023. URL <http://arxiv.org/abs/2305.18290>.
- Rajkumar Ramamurthy, Prithviraj Ammanabrolu, Kianté Brantley, Jack Hessel, Rafet Sifa, Christian Bauckhage, Hannaneh Hajishirzi, and Yejin Choi. Is Reinforcement Learning (Not) for Natural Language Processing?: Benchmarks, Baselines, and Building Blocks for Natural Language Policy Optimization, 2022. URL <http://arxiv.org/abs/2210.01241>.
- Nils Reimers and Iryna Gurevych. Sentence-BERT: Sentence embeddings using Siamese BERT-networks. In *Proceedings of the 2019 Conference on Empirical Methods in Natural Language Processing and the 9th International Joint Conference on Natural Language Processing (EMNLP-IJCNLP)*, pp. 3982–3992, Hong Kong, China, 2019. Association for Computational Linguistics. doi:10.18653/v1/D19-1410. URL <https://aclanthology.org/D19-1410>.
- Jérémy Scheurer, Jon Ander Campos, Tomasz Korbak, Jun Shern Chan, Angelica Chen, Kyunghyun Cho, and Ethan Perez. Training Language Models with Language Feedback at Scale, 2023. URL <http://arxiv.org/abs/2303.16755>.
- John Schulman, Filip Wolski, Prafulla Dhariwal, Alec Radford, and Oleg Klimov. Proximal Policy Optimization Algorithms. *arXiv:1707.06347 [cs]*, 2017. URL <http://arxiv.org/abs/1707.06347>.
- Charlie Snell, Ilya Kostrikov, Yi Su, Mengjiao Yang, and Sergey Levine. Offline RL for Natural Language Generation with Implicit Language Q Learning, 2022. URL <http://arxiv.org/abs/2206.11871>.
- Katherine Stasaski and Marti Hearst. Semantic diversity in dialogue with natural language inference. In *Proceedings of the 2022 Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies*, pp. 85–98, Seattle, United States, 2022. Association for Computational Linguistics. doi:10.18653/v1/2022.naacl-main.6. URL <https://aclanthology.org/2022.naacl-main.6>.
- Nisan Stiennon, Long Ouyang, Jeff Wu, Daniel M. Ziegler, Ryan Lowe, Chelsea Voss, Alec Radford, Dario Amodei, and Paul Christiano. Learning to summarize from human feedback, 2022. URL <http://arxiv.org/abs/2009.01325>.
- Guy Tevet and Jonathan Berant. Evaluating the evaluation of diversity in natural language generation. In *Proceedings of the 16th Conference of the European Chapter of the Association for Computational Linguistics: Main Volume*, pp. 326–346, Online, 2021. Association for Computational Linguistics. doi:10.18653/v1/2021.eacl-main.25. URL <https://aclanthology.org/2021.eacl-main.25>.
- Hugo Touvron, Thibaut Lavril, Gautier Izacard, Xavier Martinet, Marie-Anne Lachaux, Timothée Lacroix, Baptiste Rozière, Naman Goyal, Eric Hambro, Faisal Azhar, Aurelien Rodriguez, Armand Joulin, Edouard Grave, and Guillaume Lample. LLaMA: Open and Efficient Foundation Language Models, 2023a. URL <http://arxiv.org/abs/2302.13971>.
- Hugo Touvron, Louis Martin, Kevin Stone, Peter Albert, Amjad Almahairi, Yasmine Babaei, Nikolay Bashlykov, Soumya Batra, Prajjwal Bhargava, Shruti Bhosale, Dan Bikel, Lukas Blecher, Cristian Canton Ferrer, Moya Chen, Guillem Cucurull, David Esiobu, Jude Fernandes, Jeremy Fu, Wenyin Fu, Brian Fuller, Cynthia Gao, Vedanuj Goswami, Naman Goyal, Anthony Hartshorn, Saghar Hosseini, Rui Hou, Hakan Inan, Marcin Kardas, Viktor Kerkez, Madian Khabsa, Isabel Kloumann, Artem Korenev, Punit Singh Koura, Marie-Anne Lachaux, Thibaut Lavril, Jenya Lee, Diana Liskovich, Yinghai Lu, Yuning Mao, Xavier Martinet, Todor Mihaylov, Pushkar Mishra, Igor Molybog, Yixin Nie, Andrew Poulton, Jeremy Reizenstein, Rashi Rungta, Kalyan Saladi, Alan Schelten, Ruan Silva, Eric Michael Smith, Ranjan Subramanian, Xiaoqing Ellen Tan, Binh Tang, Ross Taylor, Adina Williams, Jian Xiang Kuan, Puxin Xu, Zheng Yan, Iliyan Zarov, Yuchen Zhang, Angela Fan, Melanie Kambadur, Sharan Narang, Aurelien Rodriguez, Robert Stojnic,