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[Submitted on 13 Feb 2022 ([v1](https://arxiv.org/abs/2202.06417v1)), last
revised 26 Sep 2022 (this version, v3)]
# Title: A Contrastive Framework for Neural Text Generation
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Authors:[Yixuan

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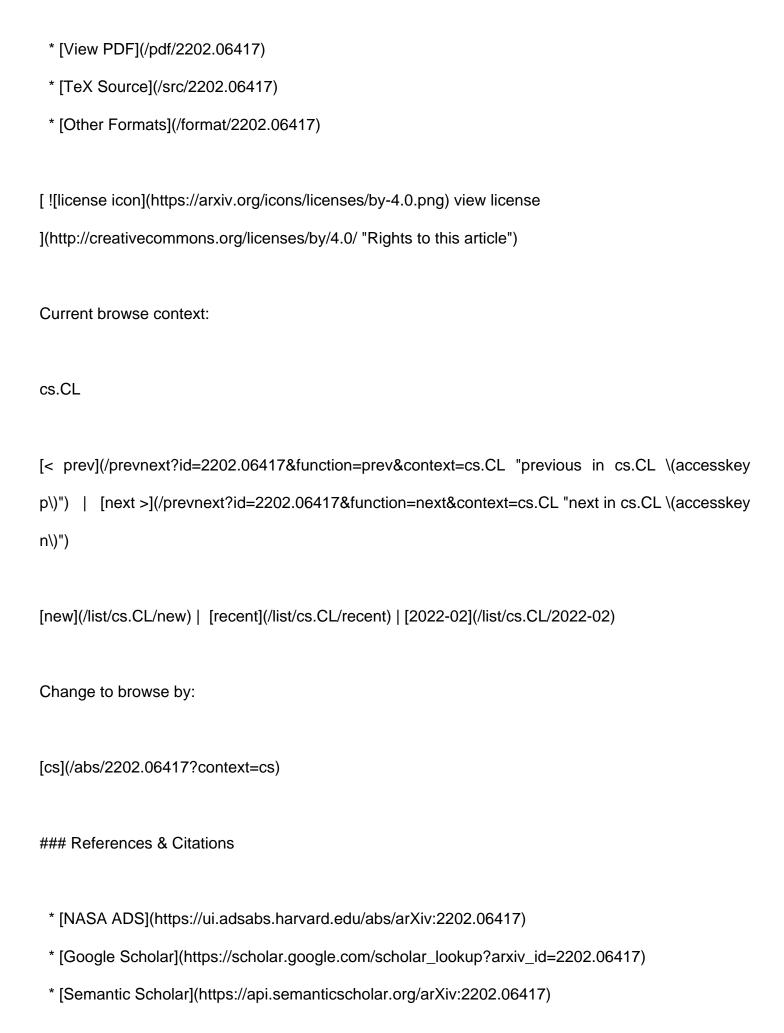
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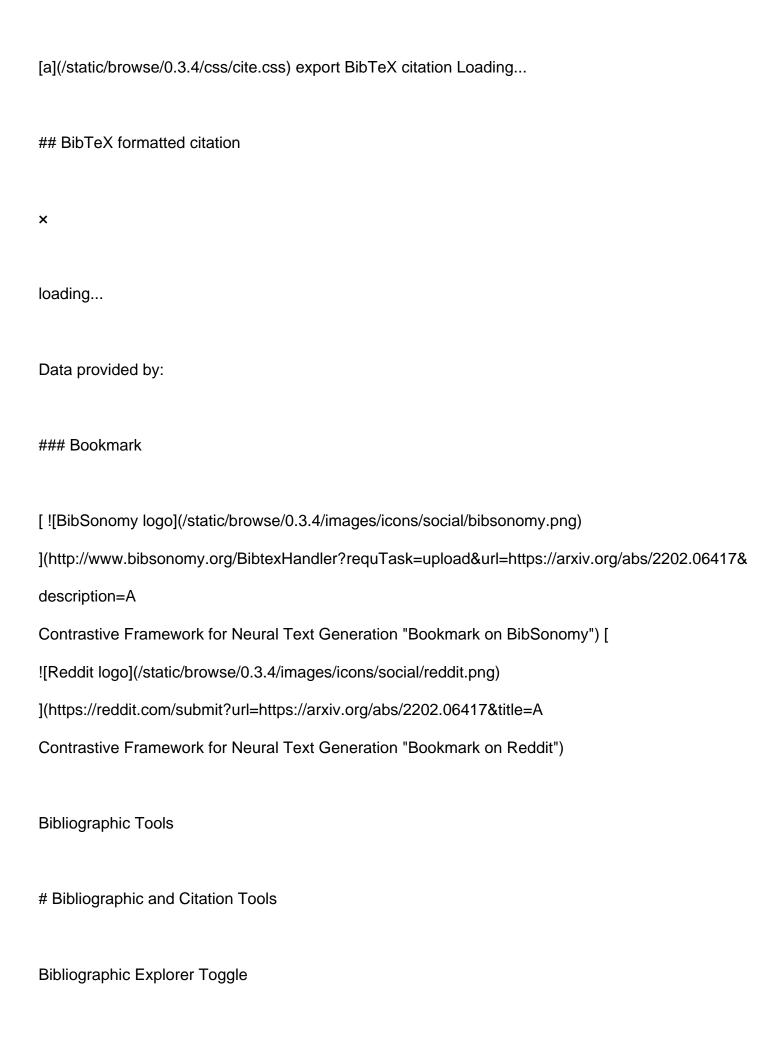
- > Abstract: Text generation is of great importance to many natural language
- > processing applications. However, maximization-based decoding methods (e.g.
- > beam search) of neural language models often lead to degenerate solutions --
- > the generated text is unnatural and contains undesirable repetitions.
- > Existing approaches introduce stochasticity via sampling or modify training
- > objectives to decrease probabilities of certain tokens (e.g., unlikelihood
- > training). However, they often lead to solutions that lack coherence. In
- > this work, we show that an underlying reason for model degeneration is the
- > anisotropic distribution of token representations. We present a contrastive
- > solution: (i) SimCTG, a contrastive training objective to calibrate the
- > model's representation space, and (ii) a decoding method -- contrastive
- > search -- to encourage diversity while maintaining coherence in the

> generated text. Extensive experiments and analyses on three benchmarks from > two languages demonstrate that our proposed approach significantly > outperforms current state-of-the-art text generation methods as evaluated by > both human and automatic metrics. Comments: | NeurIPS 2022 ---|---Subjects: | Computation and Language (cs.CL) Cite as: | [arXiv:2202.06417](https://arxiv.org/abs/2202.06417) [cs.CL] (or [arXiv:2202.06417v3](https://arxiv.org/abs/2202.06417v3) [cs.CL] for this version) | <https://doi.org/10.48550/arXiv.2202.06417> Focus to learn more arXiv-issued DOI via DataCite ## Submission history From: Yixuan Su [[view email](/show-email/d72ed512/2202.06417)] **[[v1]](/abs/2202.06417v1)** Sun, 13 Feb 2022 21:46:14 UTC (5,592 KB) **[[v2]](/abs/2202.06417v2)** Mon, 30 May 2022 08:25:58 UTC (2,809 KB) **[v3]** Mon, 26 Sep 2022 14:59:44 UTC (2,854 KB) Full-text links: ## Access Paper: View a PDF of the paper titled A Contrastive Framework for Neural Text

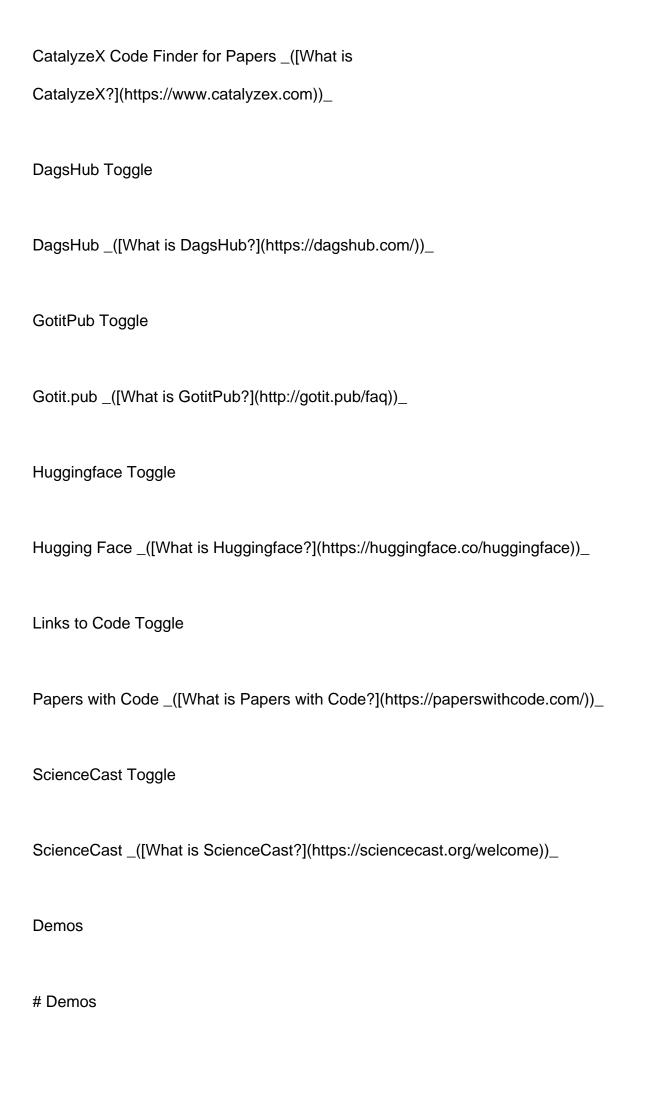
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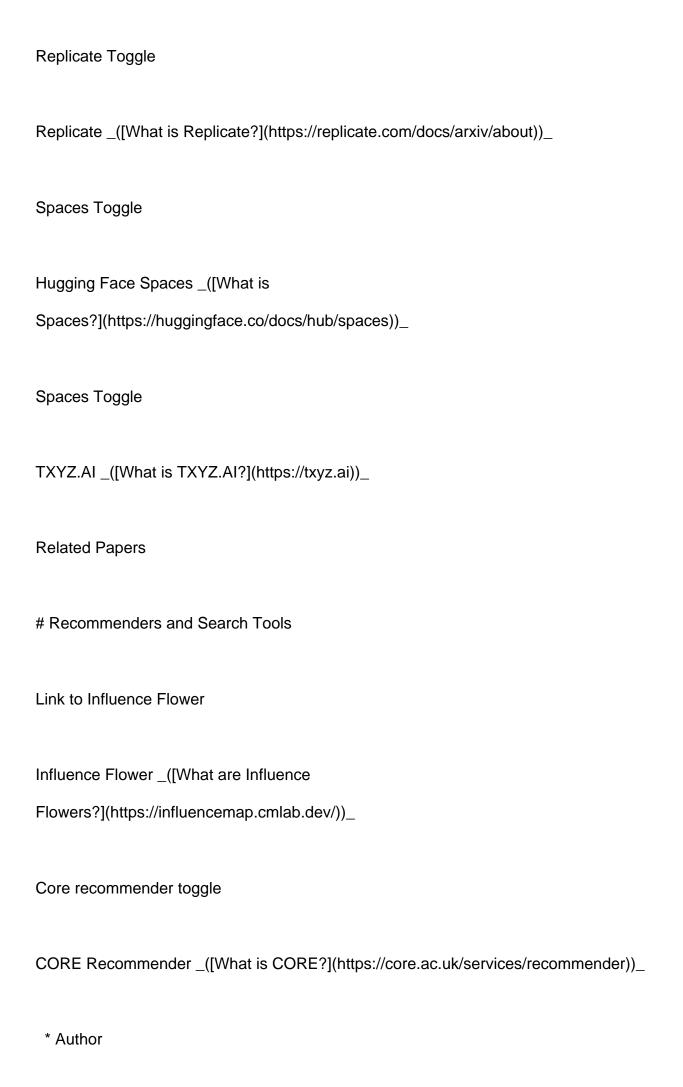
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