Read two of the papers assigned for the April 9 lecture (and listed below), and write a 1-2 page summary of the basic idea in the papers and discuss how the papers are related or different. At the end of the summary on a separate line, include one question or observations for class discussion.

* Tolga Bolukbasi, Kai-Wei Chang, James Zou, Venkatesh Saligrama, Adam Kalai. 2016. [Man is to Computer Programmer as Woman is to Homemaker? Debiasing Word Embeddings (Links to an external site.)](http://papers.nips.cc/paper/6228-man-is-to-computer-programmer-as-woman-is-to-homemaker-debiasing-word-embeddings.pdf). NIPS 2016.
* Zhao, J., Wang, T., Yatskar, M., Ordonez, V and Chang, M.-W. [Men Also Like Shopping: Reducing Gender Bias Amplification using Corpus-level Constraint. (Links to an external site.)](https://www.aclweb.org/anthology/D17-1323.pdf) EMNLP, 2017.
* Gonen, Hila, and Yoav Goldberg. 2019. ["Lipstick on a pig: Debiasing methods cover up systematic gender biases in word embeddings but do not remove them." (Links to an external site.)](https://www.aclweb.org/anthology/N19-1061.pdf) Proceedings of NAACL-HLT 2019.
* Nikhil Garg, Londa Schiebinger, Dan Jurafsky, James Zou. 2018. [Word embeddings quantify 100 years of gender and ethnic stereotypes (Links to an external site.)](http://www.pnas.org/content/pnas/early/2018/03/30/1720347115.full.pdf). Proceedings of the National Academy of Sciences 2018.

Grading will be based on technical correctness, completeness, and writing quality. Use a technical writing style and avoid typos/grammatical errors.