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Logo Design Creation Project

Proposal

We plan to create a logo generation system. The system will be designed to create logos (in the form of images) for any organization or a company based on their industry type.

A logo is an image symbol for a company, which is a kind of signature that goes with every product and move of the company. Creating such a symbol is a creative process and must align with the values of the company. It would be really cool and useful if a software system is able to generate such symbols that look credible and that also align with the nature of the company. We intend for this system to be more creative than the systems before it and if everything works out as planned we will have a state of the art creative logo generation tool.

As we read the literature on this topic, we realized that there has been some work recently. [1] seems to be the first work to try to tackle the problem using GANs rather than the typical rule-based approach as presented in [2]. [3] describes how the authors took the previously created system by [1] and tried to condition the network to color so that the user of this system could have more creative control.

For our project, we first want to recreate the improved Wasserstein GAN (iWGAN) as described in the [1], and use the same dataset that they have proposed. Once we have a working system, we would like to modify the system to be more creative. Drawing from the ideas in [3], we intend to create an evaluation metric or an aesthetic evaluation to determine how good any particular generated logo is. We intend to categorize logos based on the industry type and condition the creation of logos on that (industry type, for example: food, paper, etc.), rather than color (as done in [3]), which will take some substantial changes and improvements in order to accomplish, but will hopefully be achievable in the time-span of this semester.

References:
[1] Alexander Sage, Eirikur Agustsson, Radu Timofte, and Luc Van Gool. Logo synthesis and manipulation with clustered generative adversarial networks. In Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition, pages 5879–5888, 2018.
[2] Yi-Na Li, Kang Zhang, and Dong-Jin Li. Rule-based automatic generation of logo designs. Leonardo, 50(2):177–181, 2017.
[3] Ajkel Mino and Gerasimos Spanakis. Logan: Generating logos with a generative adversarial neural network conditioned on color. In 2018 17th IEEE International Conference on Machine Learning and Applications (ICMLA), pages 965–970. IEEE, 2018.