# (Optional) A Closer Look at Inception Score

Want to know more about why Fréchet Inception Distance has overtaken Inception Score? This paper illustrates the problems with using Inception Score.

A Note on the Inception Score (Barratt and Sharma, 2018): <https://arxiv.org/abs/1801.01973>

# (Optional) HYPE!!

Intrigued about human evaluation and HYPE (Human eYe Perceptual Evaluation) of GANs? Learn more about this human benchmark in the paper! You may notice a familiar name among the authors ;)

HYPE: A Benchmark for Human eYe Perceptual Evaluation of Generative Models (Zhou et al., 2019): <https://arxiv.org/abs/1904.01121>

# (Optional) More on Precision and Recall

Using precision and recall metrics on GANs pique your interest? See some specific methods in this paper! Note that you will learn all about StyleGAN in Week 3 of this course.

Improved Precision and Recall Metric for Assessing Generative Models (Kynkäänniemi, Karras, Laine, Lehtinen, and Aila, 2019): <https://arxiv.org/abs/1904.06991>

# (Optional) Recap of FID and IS

Need a summary of FID and IS? Here are two great articles that recap both metrics!

Fréchet Inception Distance (Jean, 2018): <https://nealjean.com/ml/frechet-inception-distance/>

GAN — How to measure GAN performance? (Hui, 2018): <https://medium.com/@jonathan_hui/gan-how-to-measure-gan-performance-64b988c47732>

Works Cited

All of the resources cited in Course 2 Week 1, in one place. You are encouraged to explore these papers/sites if they interest you! They are listed in the order they appear in the lessons.

From the videos:

* StyleGAN - Official TensorFlow Implementation: <https://github.com/NVlabs/stylegan>
* Stanford Vision Lab: <http://vision.stanford.edu/>
* Review: Inception-v3 — 1st Runner Up (Image Classification) in ILSVRC 2015 (Tsang, 2018): <https://medium.com/@sh.tsang/review-inception-v3-1st-runner-up-image-classification-in-ilsvrc-2015-17915421f77c>
* HYPE: A Benchmark for Human eYe Perceptual Evaluation of Generative Models (Zhou et al., 2019): <https://arxiv.org/abs/1904.01121>
* Improved Precision and Recall Metric for Assessing Generative Models (Kynkäänniemi, Karras, Laine, Lehtinen, and Aila, 2019): <https://arxiv.org/abs/1904.06991>
* Large Scale GAN Training for High Fidelity Natural Image Synthesis (Brock, Donahue, and Simonyan, 2019): <https://arxiv.org/abs/1809.11096>

From the notebook:

* CelebFaces Attributes Dataset (CelebA): <http://mmlab.ie.cuhk.edu.hk/projects/CelebA.html>
* ImageNet: <http://www.image-net.org/>
* The Fréchet Distance between Multivariate Normal Distributions (Dowson and Landau, 1982): <https://core.ac.uk/reader/82269844>