All You Need is Dogball

Kai Arulkumaran
Imperial College London
London, UK
ka709@ic.ac.uk

Matthew Kelcey
Victoria, Australia
matthew.kelcey@gmail.com

Andrew Brock
Heriot-Watt University
Edinburgh, UK
ajb5@hw.ac.uk

Abstract

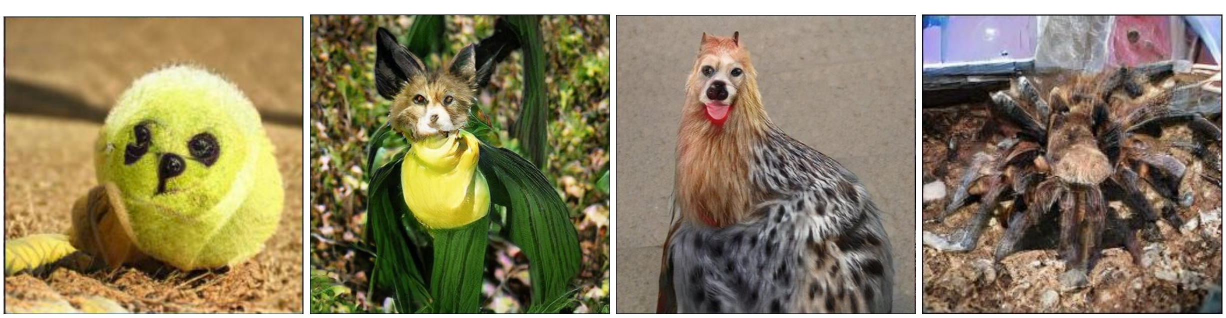
The year is 2019, and humanity is on the brink of destruction. The latter fact has nothing to do with the current state of AI, but if we do manage to survive the next few decades, it may well do. If AI can now beat us at our own simulated war games, or convince us that there exists a secret herd of unicorns in South America, what next? All things considered, we propose that a reasonable option is to always look on the bright side of life. More specifically, we chronicle here the conception of the well-loved AI creation, Dogball, and its later adventures on the interwebs.

1 Introduction

First, we were told that attention is all you need (Vaswani et al., 2017). Then, we were told that, just maybe, you *didn't* need attention (Press & Smith, 2018). And somewhere along the way, we were also told that all we needed was CNNs (Chen & Wu, 2017), but by that point Bored Yann LeCun was getting a little repetitive and we kind of ignored that one #torched. So now, we're here to say that all you need is Dogball, because YOLO (Redmon & Farhadi, 2018).

The origins of Dogball lie in the Inception wars of 2016-2018 (Salimans et al., 2016), in which research groups worldwide were competing to make the prettiest, most high resolution faces in the name of science. Despite heroic efforts to reduce GAN violence (Albanie et al., 2017), the arms race escalated in recent years, culminating in the notorious BigGAN[1] (Brock et al., 2019). With one fell swoop and a lot of TPUs (Buchlovsky et al., 2019), BigGAN blew other GANs out the water, putting an end to the conflict[2].

Many experiments went into the creation of the final BigGAN models, and these were duly chronicled in the appendix. Indeed, the community noted the level of detail available, a feat usually reserved for works by Hochreiter (Klambauer et al., 2017). Experiments ranged over hyperparameters, regularisation strategies, noise distributions[3], and much more. However, the most serendipitous finding was Dogball, a creation from a BigGAN in the middle of training. Dogball and his family of chimeras (see Figure 1) were the result of a phenomenon that was named *class leakage*, bringing literal meaning to the maxim that deep learning is alchemy.



(a) Dogball (b) Catflower (c) Hendog (d) Nope

Figure 1: Dogball family portraits. (a-c) Dogball, Catflower and Hendog are all members of the *classus leakus* family. (d) Nope is extended family from the father's side.

[1]Whose aliases also include "the BFG" (big feedforward GAN).

[2]At least until StyleGAN showed up a few months later (Karras et al., 2018).

[3]RIP Bernie the Bernoulli BigGAN, your hypercubic binary latent space was beautiful, but alas you were not amenable to the truncation trick.

2 Cultural Impact

Deep learning research is no stranger to whimsy. From figuratively (Kaiser et al., 2017; Schmidhuber, 2018) to literally outrageous (Shazeer et al., 2017) names, deep learning researchers are fond of their wordplay (Donahue et al., 2017; Tomczak & Welling, 2018). The community is also a fan of animals, with a veritable zoo of models, including MAMLs (Finn et al., 2017), Reptiles (Nichol & Schulman, 2018), SNAILs (Mishra et al., 2018) and even DRAGANs (Kodali et al., 2017). Given all of this, it was perhaps inevitable that we could put all the seriousness aside for a moment[4], and relish in the glory that was Dogball (see Figure 2).

Figure 2: GANs are only useful for making pretty pict-ALL GLORY TO THE DOGBALL!

Dogball appealed through classic memes (see Figure 3) and other pop culture references (see Figure 4). Despite the small backlash to the proliferation of Dogball memes (see Figure 5), resistance was futile (see Figure 6), and was eventually assimilated (see Figure 7).

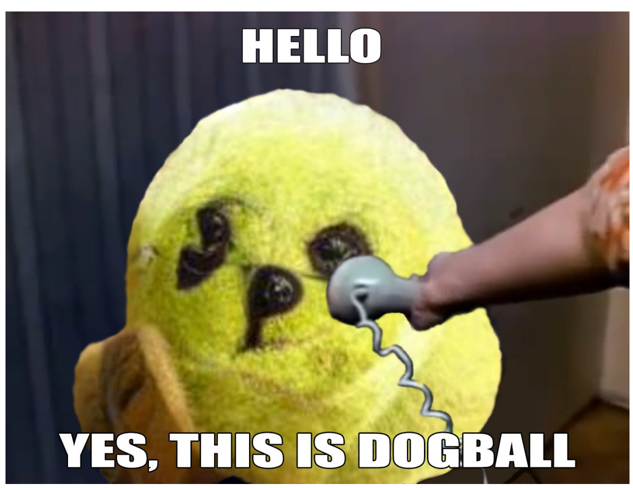
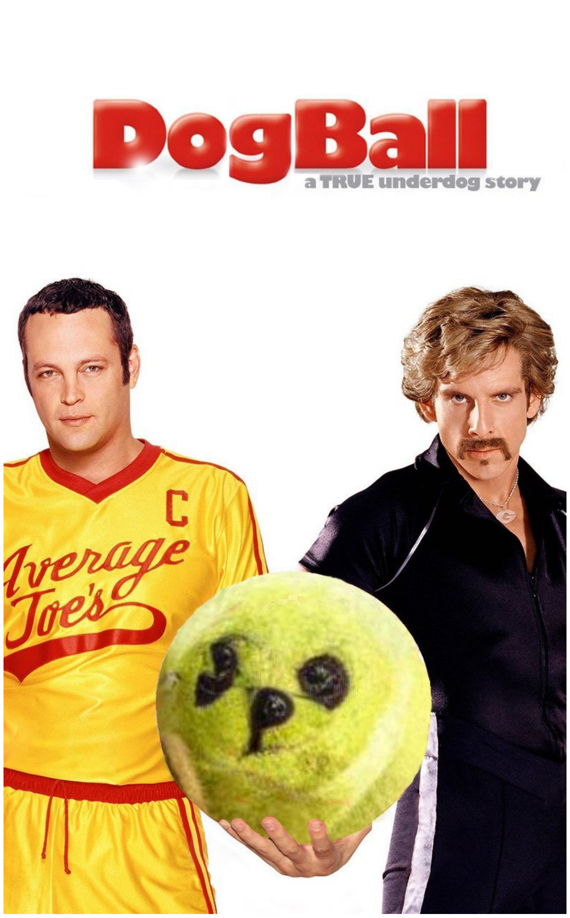
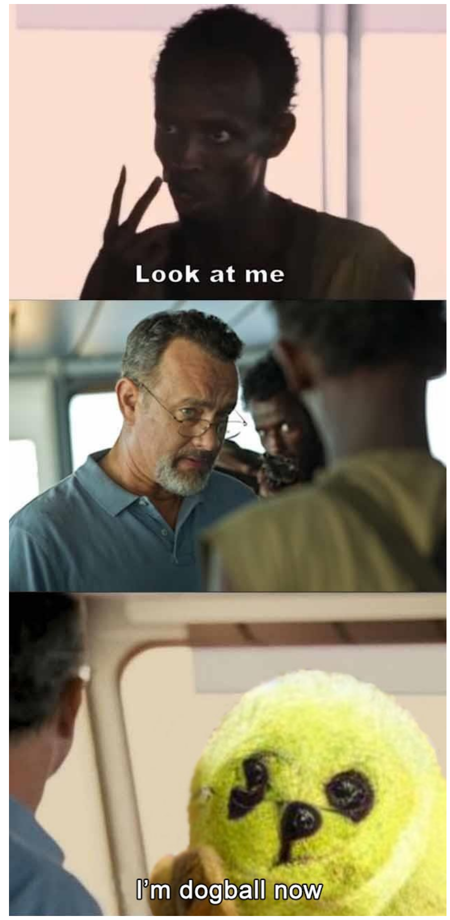


Figure 3: On the phone with the English-speaking South American unicorns, another example of AI-created phenomenon (Radford et al., 2019).

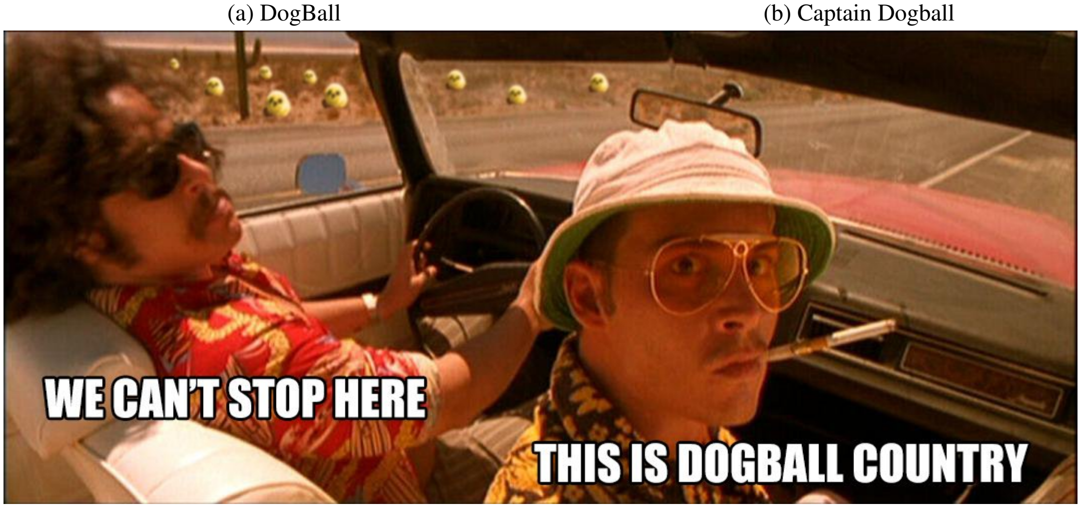
[4]Current topics included how many meta-'s to include in your meta-learning algorithm, and choosing which Sesame Street character to name your new NLP model after.



(a) DogBall



(b) Captain Dogball



(c) Fear and Dogball in Las Vegas

Figure 4: Films are parables for modern times. (a) is the source of the common adage, "If you can dodge a wrench, you can dodge a Dogball." (b) is about dressing for the job you want. (c) drugs are bad, OK?

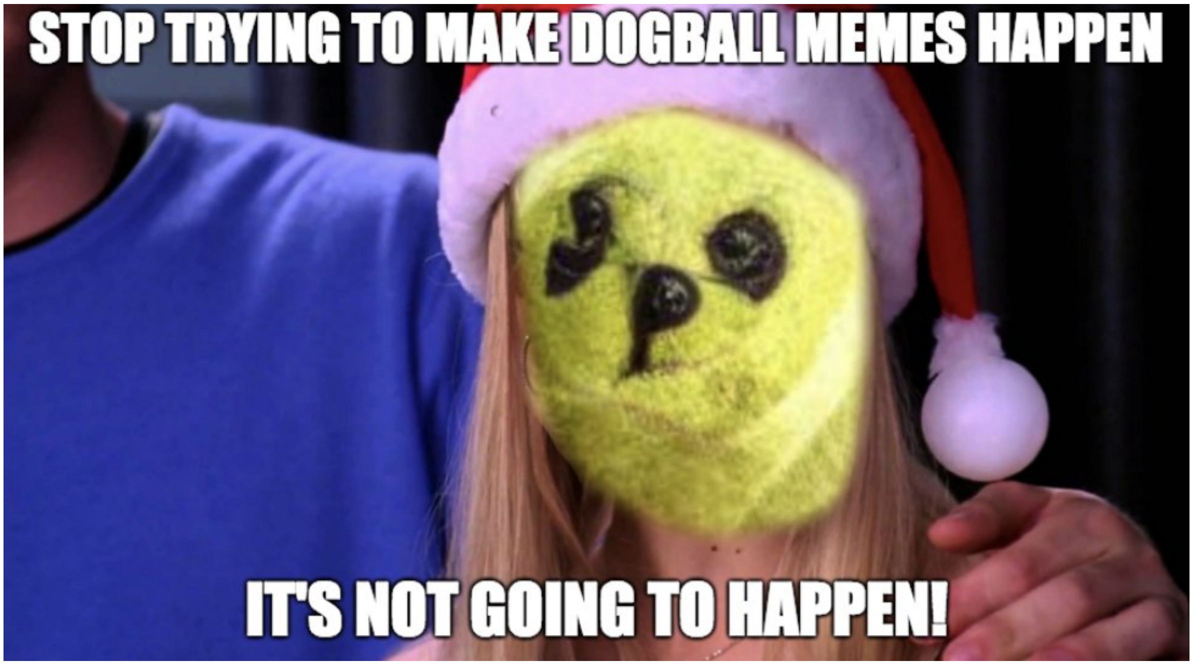


Figure 5: Oh my God, Mat! You can't just ask people to stop making dogball memes!

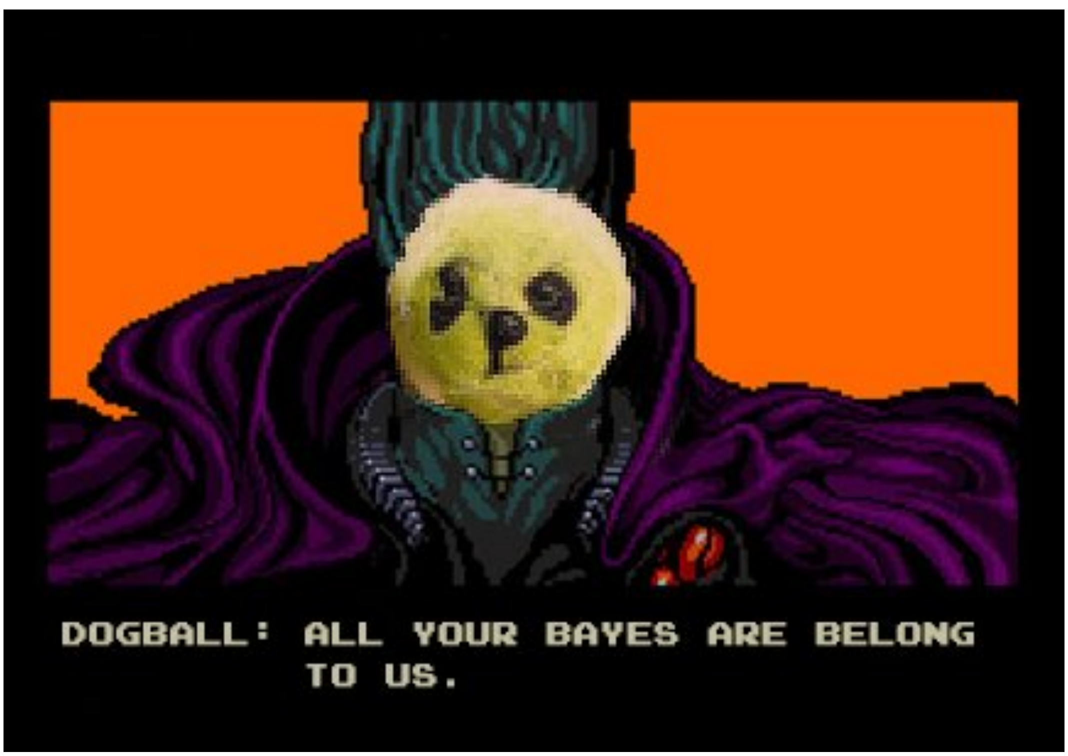


Figure 6: "Likelihood-based models have no chance to survive make your time."

Figure 7: Honestly, neither do we.

3 Conclusion

Despite the short-lived nature of fame on the internet and the even shorter-lived nature of state-of-the-art results in deep learning, the legacy of BigGAN and Dogball lives on in various places, such as in the custom emoji of various research lab Slack channels. The authors hope that this work serves as a reminder that, once in a while, it's nice to instead work on the frivolous uses of AI.

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