[A Gentle Introduction to Generative Adversarial Networks (GANs) - MachineLearningMastery.com](https://machinelearningmastery.com/what-are-generative-adversarial-networks-gans/)

GANs.

Breadth of different GANs and how they’re used.

Different gan architecture work on same problem.

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History:

GAN – Goodfellow 2014

Deep Convolutional GAN – Radford 2015

Conditional GAN – to train for a specific class/ style of image.

Latent space vector -> corresponds to output image

Using GANs to train discriminators for standard image tasks

Generative modelling for data augmentation.

Among these reasons, he highlights GANs’ successful ability to model high-dimensional data, handle missing data, and the capacity of GANs to provide multi-modal outputs or multiple plausible answers.

Perhaps the most compelling application of GANs is in conditional GANs for tasks that require the generation of new examples. Here, Goodfellow indicates three main examples:

* **Image Super-Resolution**. The ability to generate high-resolution versions of input images.
* **Creating Art**. The ability to great new and artistic images, sketches, painting, and more.
* **Image-to-Image Translation**. The ability to translate photographs across domains, such as day to night, summer to winter, and more.