

# Deepfakes

Author, Santosh Kumar

A Data Science Foundation Blog

February 2020

-----  
[www.datascience.foundation](http://www.datascience.foundation)

Copyright 2016 - 2017 Data Science Foundation

Deepfakes are so named as the technology used to create fake, but extremely believable video and media representations, is based on deep learning; a branch of machine learning that applies neural net simulation to massive data sets. AI enabled platforms gather data on a source face and transpose the face onto a target, very similar to wearing a mask in old spy movies. The field is advancing through generative adversarial networks (GANS) to pit two AI algorithms against each other, one creating the fakes and the other grading its efforts, teaching the synthesis engine to make better forgeries.

The technology is mainly developed to support and solve real time problems in the cinema world. The technology used in many Hollywood movies to transpose real or fictional faces onto other actors. Even simple application tools; [FakeApp](#) and [DeepFaceLab](#), can be used to produce impressive results.

So, Deepfake technology provides exciting opportunities for the entertainment and gaming industry that range from editing, dubbing, refining and repairing video. To resolving the uncanny valley effect in video games, the creation of real time simulation apps that allow us to try on clothes or hairstyles, and even to train medical professionals.

However, with worrying frequency, the technology is being misused by unethical practitioners to manipulate facts and create false media featuring politicians and celebrities. The misuse of Deepfakes refer to manipulated videos, or other digital representations produced by sophisticated artificial intelligence, that yield fabricated images and sounds that appear to be real without legal permission of the source. According to a MIT technology report, a device that enables Deepfakes can be “a perfect weapon for purveyors of fake news who want to influence everything from stock prices to elections.”

There is huge scope for the use of this technology for both ethical and unethical usage.

The more detailed application will be discussed in upcoming white paper...keep checking

## About the Data Science Foundation

The Data Science Foundation is a professional body representing the interests of the Data Science Industry. Its membership consists of suppliers who offer a range of big data analytical and technical services and companies and individuals with an interest in the commercial advantages that can be gained from big data. The organisation aims to raise the profile of this developing industry, to educate people about the benefits of knowledge based decision making and to encourage firms to start using big data techniques.

## Contact Data Science Foundation

Email: [admin@datascience.foundation](mailto:admin@datascience.foundation)

Telephone: 0161 926 3641

Atlantic Business Centre

Atlantic Street

Altrincham

WA14 5NQ

web: [www.datascience.foundation](http://www.datascience.foundation)

---

### ***Data Science Foundation***

Data Science Foundation, Atlantic Business Centre, Atlantic Street, Altrincham, WA14 5NQ

Tel: 0161 926 3670 Email: [admin@datascience.foundation](mailto:admin@datascience.foundation) Web: [www.datascience.foundation](http://www.datascience.foundation)

Registered in England and Wales 4th June 2015, Registered Number 9624670