# Links

How Oculus uses AI for hand tracking : <https://augmentedstartups.medium.com/how-oculus-uses-ai-for-hand-tracking-8d9eb8046029>

Using deep neural networks for accurate hand-tracking on Oculus Quest : <https://ai.facebook.com/blog/hand-tracking-deep-neural-networks>

DeepHandsVR: Hand Interface Using Deep Learning in Immersive Virtual Reality: <https://www.mdpi.com/2079-9292/9/11/1863>

Handcrated and Deep Trackers: Recent Visual Object Tracking Approaches and Trends: <https://arxiv.org/pdf/1812.07368.pdf>

Estimation de la pose: <https://www.tensorflow.org/lite/models/pose_estimation/overview>

How Accurate is Oculus Quest 2 Hand-tracking Feature?: <https://www.youtube.com/watch?v=g8fGShHy3MA&ab_channel=SpookyFairy>

Hand Physics Lab: Hand Tracking Demos in Oculus Quest!: <https://www.youtube.com/watch?v=J0KhC1GpLSQ&ab_channel=AdamSavage%E2%80%99sTested>

Hand physic lab: <https://sidequestvr.com/app/750/hand-physics-lab>

# Using deep neural networks for accurate hand-tracking on Oculus Quest

Monochrome camera -> image recognition -> hand pose estimation

No active depth-sensing nor glove

* Gives better result than depth based solution ( also smaller volume, weight, power and cost)

Deep learning and model-based tracking

* Predicts land marks position
* 26 DOF of the hand

Does not give information on the architechture of the neural network

# Handcrated and Deep Trackers: Recent Visual Object Tracking Approaches and Trends

*File name = 1812.07368.pdf*

VOT = visual object tracking

Deep learning shows good result for VOT

* Different kind of network: RNN, CNN, residual networks, auto-encoders
* Hand crafted Deep features
* Needs a lot of data

Many tracking algorithm are presented in this article

OTTC = Object tracking and temple color

* Benchmark for evalutation of tracker introduced in this article

Comparison of 24 tracking algorithms

The benchmark has shown that regularized CFTs has the better performances comared to the others