



- Lua-based
- Imperative

2002

theano

- Python-based
- Computational graph
- Auto differentiation

2007

Caffe

- Model library
- Deployment

2013



- Declarative
- Computational graph

2015

PyTorch

- Imperative
- Dynamic graph

2017



TensorFlow

- Imperative
- One-click switching between dynamic and static graphs

2019



MindSpore

- Functional
- AI compiler
- Distributed parallelism

2020