

Python

- [Anaconda](#)
- [TensorFlow](#) [Keras](#)
-



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- Astra Linux Special Edition .10015-01 .10015-10 (1.7)
- Astra Linux Special Edition .10015-01 (1.6)
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6.5 .

(sudo) (Astra Linux Special Edition -).

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- [Anaconda](#) - [Python](#) [R](#), , ;
- [TensorFlow](#) - , [Google](#) ;
- [Keras](#) - , [Python](#). [Deeplearning4j](#), [TensorFlow](#) [Theano](#). ;

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- ;
- ;

Anaconda

1. . ,:



- ;
- , (..).

, /opt/python:

```
sudo mkdir /opt/python
sudo chmod a+w /opt/python
cd /opt/python
```

, PATH.

2. Anaconda ca-certificates:

```
sudo apt install ca-certificates
```

3. Anaconda web- repo.anaconda.com. [Anaconda3-5.2.0-Linux-x86_64.sh](#):

```
wget https://repo.anaconda.com/archive/Anaconda3-5.2.0-Linux-x86\_64.sh
```

4. :

```
chmod +x Anaconda3-5.2.0-Linux-x86_64.sh
```

5. Anaconda (/opt/python):

```
sudo ./Anaconda3-5.2.0-Linux-x86_64.sh -b -p /opt/python/anaconda
```

```
:  
-b - "" ( );  
-p /opt/python/anaconda - /opt/python/ .
```



TensorFlow Keras

1. TensorFlow Keras. [WEB-](#) .

2. :

```
tar xvzf packages.tgz
```

3. :

```
sudo anaconda/bin/conda install packages/general/*.tar.bz2  
sudo anaconda/bin/conda install packages/tensorflow/*.tar.bz2  
sudo anaconda/bin/conda install packages/keras/*.tar.bz2  
sudo anaconda/bin/pip install packages/keras/*.whl
```

```
, :  
  
tensorflow 1.10.0 requires astor>=0.6.0, which is not installed.  
tensorflow 1.10.0 requires gast>=0.2.0, which is not installed.  
tensorflow 1.10.0 requires grpcio>=1.8.6, which is not installed.  
tensorflow 1.10.0 requires tensorboard<1.11.0,>=1.10.0, which is not installed.  
tensorflow 1.10.0 requires termcolor>=1.1.0, which is not installed.  
google-cloud-core 0.29.1 requires google-api-core<2.0.0dev,>=1.0.0, which is not installed.  
google-auth 1.6.2 requires cachetools>=2.0.0, which is not installed.  
google-auth 1.6.2 requires pyasn1-modules>=0.2.1, which is not installed.  
google-auth 1.6.2 requires rsa>=3.1.4, which is not installed.  
distributed 1.21.8 requires msgpack, which is not installed.
```

, pip:



You are using pip version 10.0.1, however version 20.0.2 is available.
You should consider upgrading via the 'pip install --upgrade pip' command.

, , , , :

```
sudo anaconda/bin/pip install --upgrade pip
```

1. :

```
anaconda/bin/conda list
```

:

```
anaconda/bin/pip list
```

2. Python:

a. :

```
anaconda/bin/python
```

b. :

```
 import tensorflow
```

, . :

```
 import keras
```

```
 Using TensorFlow backend
```

, Keras , , TensorFlow .