

Setting up SSH to virtual machine:

```
rishanksoni@Rishanks-MacBook-Air ~ % ssh -p 2222 rishank@localhost
rishank@localhost's password:
Welcome to Ubuntu 24.04.1 LTS (GNU/Linux 6.8.0-51-generic aarch64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/pro

System information as of Fri Jan 24 03:57:55 PM UTC 2025

System load:          0.0
Usage of /:           28.5% of 18.02GB
Memory usage:        21%
Swap usage:          0%
Processes:           91
Users logged in:      1
IPv4 address for enp0s8: 10.0.2.15
IPv6 address for enp0s8: fd00::a00:27ff:fec6:c82f

Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

Last login: Fri Jan 24 15:53:56 2025 from 10.0.2.2
rishank@stt:~$
```

removing Python from the system:

```
rishank@stt:~/python310_build/Python-3.10.11$ sudo apt list | grep -i python3.10
```

WARNING: apt does not have a stable CLI interface. Use with caution in scripts.

```
rishank@stt:~/python310_build/Python-3.10.11$
```

```
rishank@stt:~$ history -c && history -w
```

```
rishank@stt:~$ history
```

```
1 history
```

```
rishank@stt:~$
```

```
rishank@stt:~/python310_build/Python-3.10.11$ history -c && history -w
```

```
rishank@stt:~/python310_build/Python-3.10.11$ history
```

```
1 history
```

```
rishank@stt:~/python310_build/Python-3.10.11$ cd ~/downloads
```

```
rishank@stt:~/downloads$ wget https://www.python.org/ftp/python/3.10.11/Python-3.10.11.tgz
```

```

rishank@stt:~/downloads/Python-3.10.11$ ./configure \
--prefix=$HOME/local/python310 \
--enable-optimizations \
--with-ensurepip=install
checking build system type... aarch64-unknown-linux-gnu
checking host system type... aarch64-unknown-linux-gnu
checking for python3.10... python3.10
checking for --enable-universalsdk... no
checking for --with-universal-archs... no
checking MACHDEP... "linux"
checking for gcc... gcc
checking whether the C compiler works... yes
checking for C compiler default output file name... a.out
checking for suffix of executables...
checking whether we are cross compiling... no
checking for suffix of object files...

```

```

checking for --with-static-libpython... yes
checking for --disable-test-modules... no
configure: creating ./config.status
config.status: creating Makefile.pre
config.status: creating Misc/python.pc
config.status: creating Misc/python-embed.pc
config.status: creating Misc/python-config.sh
config.status: creating Modules/ld_so_aix
config.status: creating pyconfig.h
config.status: pyconfig.h is unchanged
creating Modules/Setup.local
creating Makefile
rishank@stt:~/downloads/Python-3.10.11$ make -j$(nproc)
make install

```

```

source ~/.bashrc
rishank@stt:~/downloads/Python-3.10.11$ echo 'export PATH=$HOME/local/python310/bin:$PATH' >> ~/.bashrc
echo 'export PYTHONPATH=$HOME/local/python310/lib/python3.10/site-packages:$PYTHONPATH' >> ~/.bashrc
source ~/.bashrc

```

```

source ~/.bashrc
rishank@stt:~/downloads/Python-3.10.11$ python3.10 --version
Python 3.10.11
rishank@stt:~/downloads/Python-3.10.11$

```

```

rishank@stt:~/downloads/Python-3.10.11$ ~/local/python310/bin/python3.10 -m venv ~/envs/py310env
rishank@stt:~/downloads/Python-3.10.11$ source ~/envs/py310env/bin/activate
(py310env) rishank@stt:~/downloads/Python-3.10.11$ pip install label-studio

```

Getting pip not found error after normal installation:

```

make: *** [Makefile:1529: _bootinstall] Error 1
rishank@stt:~/downloads/Python-3.10.11$ python3.10 -m venv ~/envs/py310env
rishank@stt:~/downloads/Python-3.10.11$ python3.10 -m venv
usage: venv [-h] [--system-site-packages] [--symlinks | --copies] [--clear] [--upgrade] [--without-pip] [--prompt PROMPT] [--upgrade-deps]
             ENV_DIR [ENV_DIR ...]
venv: error: the following arguments are required: ENV_DIR
rishank@stt:~/downloads/Python-3.10.11$ pip install label-studio
Command 'pip' not found, but can be installed with:
sudo apt install python3-pip
rishank@stt:~/downloads/Python-3.10.11$

```

Configuring with ensure pip:

```

rishank@stt:~$ ./configure \
--prefix=$HOME/local/python310 \
--enable-optimizations \
--with-ensurepip=install

```

```

checking for --with-experimental-libs... no
checking for --with-static-libpython... yes
checking for --disable-test-modules... no
configure: creating ./config.status
config.status: creating Makefile.pre
config.status: creating Misc/python.pc
config.status: creating Misc/python-embed.pc
config.status: creating Misc/python-config.sh
config.status: creating Modules/ld_so_aix
config.status: creating pyconfig.h
config.status: pyconfig.h is unchanged
creating Modules/Setup.local
creating Makefile
rishank@stt:~/downloads/Python-3.10.11$ make -j$(nproc)
make install

```

```

rishank@stt:~/downloads/Python-3.10.11$ ~/local/python310/bin/python3.10 -m venv ~/envs/py310env
rishank@stt:~/downloads/Python-3.10.11$ source ~/envs/py310env/bin/activate
(py310env) rishank@stt:~/downloads/Python-3.10.11$ pip install label-studio

```

```
source ~/.bashrc
rishank@stt:~/downloads/Python-3.10.11$ echo 'export PATH=$HOME/local/python310/bin:$PATH' >> ~/.bashrc
echo 'export PYTHONPATH=$HOME/local/python310/lib/python3.10/site-packages:$PYTHONPATH' >> ~/.bashrc
source ~/.bashrc
Run Testcases 0 0 0 0 Live Share
```

Getting SSL error when installing pip:

```
python -c "import numpy; print(numpy.__version__)"
WARNING: pip is configured with locations that require TLS/SSL, however the ssl module in Python is not available.
WARNING: Retrying (Retry(total=4, connect=None, read=None, redirect=None, status=None)) after connection broken by 'SSLError("Can't connect to HTTPS URL because the SSL module is not available.")': /simple/numpy/
WARNING: Retrying (Retry(total=3, connect=None, read=None, redirect=None, status=None)) after connection broken by 'SSLError("Can't connect to HTTPS URL because the SSL module is not available.")': /simple/numpy/
WARNING: Retrying (Retry(total=2, connect=None, read=None, redirect=None, status=None)) after connection broken by 'SSLError("Can't connect to HTTPS URL because the SSL module is not available.")': /simple/numpy/
WARNING: Retrying (Retry(total=1, connect=None, read=None, redirect=None, status=None)) after connection broken by 'SSLError("Can't connect to HTTPS URL because the SSL module is not available.")': /simple/numpy/
WARNING: Retrying (Retry(total=0, connect=None, read=None, redirect=None, status=None)) after connection broken by 'SSLError("Can't connect to HTTPS URL because the SSL module is not available.")': /simple/numpy/
Could not fetch URL https://pypi.org/simple/numpy/: There was a problem confirming the ssl certificate: HTTPSConnectionPool(host='pypi.org', port=443): Max retries exceeded with url: /simple/numpy/ (Caused by SSLError("Can't connect to HTTPS URL because the SSL module is not available.")) - skipping
ERROR: Could not find a version that satisfies the requirement numpy (from versions: none)
ERROR: No matching distribution found for numpy
WARNING: pip is configured with locations that require TLS/SSL, however the ssl module in Python is not available.
Could not fetch URL https://pypi.org/simple/pip/: There was a problem confirming the ssl certificate: HTTPSConnectionPool(host='pypi.org', port=443): Max retries exceeded with url: /simple/pip/ (Caused by SSLError("Can't connect to HTTPS URL because the SSL module is not available.")) - skipping
Traceback (most recent call last):
```

Configuring ssl with pip:

```
(py310env) rishank@stt:~/downloads$ tar xzf openssl-1.1.1w.tar.gz
cd openssl-1.1.1w
(py310env) rishank@stt:~/downloads/openssl-1.1.1w$ ./config --prefix=$HOME/local/openssl
```

```
(py310env) rishank@stt:~/downloads/openssl-1.1.1w$ ./config --prefix=$HOME/local/openssl
Operating system: aarch64-whatever-linux2
Configuring OpenSSL version 1.1.1w (0x1010117fL) for linux-aarch64
Using os-specific seed configuration
Creating configdata.pm
Creating Makefile

*****
***                                ***
***  OpenSSL has been successfully configured                                ***
***                                ***
***  If you encounter a problem while building, please open an             ***
***  issue on GitHub <https://github.com/openssl/openssl/issues>          ***
***  and include the output from the following command:                    ***
***                                ***
***  perl configdata.pm --dump                                              ***
***                                ***
***  (If you are new to OpenSSL, you might want to consult the             ***
***  'Troubleshooting' section in the INSTALL file first)                 ***
***                                ***
*****
(py310env) rishank@stt:~/downloads/openssl-1.1.1w$
```

```
/home/rishank/local/openssl/share/doc/openssl/html/man7/x509.html
(py310env) rishank@stt:~/downloads/openssl-1.1.1w$ cd ~/downloads/Python-3.10.11
(py310env) rishank@stt:~/downloads/Python-3.10.11$ ./configure \
--prefix=$HOME/local/python310 \
--with-openssl=$HOME/local/openssl \
--with-openssl-rpath=auto \
--enable-optimizations
```

```
config.status: creating pyconfig.h
config.status: pyconfig.h is unchanged
creating Modules/Setup.local
creating Makefile
(py310env) rishank@stt:~/downloads/Python-3.10.11$ make clean
make -j$(nproc)
make install
```

```
(py310env) rishank@stt:~/downloads/Python-3.10.11$ echo 'export LD_LIBRARY_PATH=$HOME/local/openssl/lib:$LD_LIBRARY_PATH' >> ~/.bashrc
(py310env) rishank@stt:~/downloads/Python-3.10.11$ source ~/.bashrc
```

```
(py310env) rishank@stt:~/downloads/Python-3.10.11$ source ~/Downloads/Python-3.10.11/activate
rishank@stt:~/downloads/Python-3.10.11$ ~/local/python310/bin/python3.10 -m venv ~/envs/py310env
rishank@stt:~/downloads/Python-3.10.11$ source ~/envs/py310env/bin/activate
(py310env) rishank@stt:~/downloads/Python-3.10.11$
```

```
Read environment variables from: /home/rishank/.local/share/label-studio/.env
get 'SECRET_KEY' casted as '<class 'str'>' with default ''
Starting new HTTPS connection (1): pypi.org:443
https://pypi.org:443 "GET /pypi/label-studio/json HTTP/1.1" 200 33651
No module named '_sqlite3'
Traceback (most recent call last):
  File "/home/rishank/envs/py310env/bin/label-studio", line 8, in <module>
    sys.exit(main())
  File "/home/rishank/envs/py310env/lib/python3.10/site-packages/label_studio/server.py", line 296, in main
    setup_env()
  File "/home/rishank/envs/py310env/lib/python3.10/site-packages/label_studio/server.py", line 35, in setup_env
    get_wsgi_application()
  File "/home/rishank/envs/py310env/lib/python3.10/site-packages/django/core/wsgi.py", line 12, in get_wsgi_application
    django.setup(set_prefix=False)
  File "/home/rishank/envs/py310env/lib/python3.10/site-packages/django/__init__.py", line 24, in setup
    apps.populate(settings.INSTALLED_APPS)
  File "/home/rishank/envs/py310env/lib/python3.10/site-packages/django/apps/registry.py", line 116, in populate
    app_config.import_models()
  File "/home/rishank/envs/py310env/lib/python3.10/site-packages/django/apps/config.py", line 269, in import_models
    self.models_module = import_module(models_module_name)
  File "/home/rishank/local/python310/lib/python3.10/importlib/__init__.py", line 126, in import_module
    return _bootstrap._gcd_import(name[level:], package, level)
  File "<frozen importlib._bootstrap>", line 1050, in _gcd_import
  File "<frozen importlib._bootstrap>", line 1027, in _find_and_load
  File "<frozen importlib._bootstrap>", line 1006, in _find_and_load_unlocked
  File "<frozen importlib._bootstrap>", line 688, in _load_unlocked
  File "<frozen importlib._bootstrap_external>", line 883, in exec_module
  File "<frozen importlib._bootstrap>", line 241, in _call_with_frames_removed
  File "/home/rishank/envs/py310env/lib/python3.10/site-packages/django/contrib/auth/models.py", line 3, in <module>
    from django.contrib.auth.base_user import AbstractBaseUser, BaseUserManager
  File "/home/rishank/envs/py310env/lib/python3.10/site-packages/django/contrib/auth/base_user.py", line 57, in <module>
    class AbstractBaseUser(models.Model):
  File "/home/rishank/envs/py310env/lib/python3.10/site-packages/django/db/models/base.py", line 143, in __new__
    new_class.add_to_class("_meta", Options(meta, app_label))
  File "/home/rishank/envs/py310env/lib/python3.10/site-packages/django/db/models/base.py", line 371, in add_to_class
    value.contribute_to_class(cls, name)
  File "/home/rishank/envs/py310env/lib/python3.10/site-packages/django/db/models/options.py", line 243, in contribute_to_class
    self.db_table, connection.ops.max_name_length())
  File "/home/rishank/envs/py310env/lib/python3.10/site-packages/django/utils/connection.py", line 15, in __getattr__
    return getattr(self._connections[self._alias], item)
  File "/home/rishank/envs/py310env/lib/python3.10/site-packages/django/utils/connection.py", line 62, in __getitem__
    conn = self.create_connection(alias)
  File "/home/rishank/envs/py310env/lib/python3.10/site-packages/django/db/utils.py", line 193, in create_connection
    backend = load_backend(db["ENGINE"])
  File "/home/rishank/envs/py310env/lib/python3.10/site-packages/django/db/utils.py", line 113, in load_backend
    return import_module("%s.base" % backend_name)
  File "/home/rishank/local/python310/lib/python3.10/importlib/__init__.py", line 126, in import_module
    return _bootstrap._gcd_import(name[level:], package, level)
  File "/home/rishank/envs/py310env/lib/python3.10/site-packages/django/db/backends/sqlite3/base.py", line 9, in <module>
    from sqlite3 import dbapi2 as Database
  File "/home/rishank/local/python310/lib/python3.10/sqlite3/__init__.py", line 57, in <module>
    from sqlite3.dbapi2 import *
  File "/home/rishank/local/python310/lib/python3.10/sqlite3/dbapi2.py", line 27, in <module>
    from _sqlite3 import *
ModuleNotFoundError: No module named '_sqlite3'
Sentry is attempting to send 2 pending events
Waiting up to 2 seconds
Press Ctrl-C to quit
```

```

sys.exit(main())
File "/home/rishank/envs/py310env/lib/python3.10/site-packages/label_studio/server.py", line 296, in main
    _setup_env()
File "/home/rishank/envs/py310env/lib/python3.10/site-packages/label_studio/server.py", line 35, in _setup_env
    get_wsgi_application()
File "/home/rishank/envs/py310env/lib/python3.10/site-packages/django/core/wsgi.py", line 12, in get_wsgi_application
    django.setup(set_prefix=False)
File "/home/rishank/envs/py310env/lib/python3.10/site-packages/django/__init__.py", line 24, in setup
    apps.populate(settings.INSTALLED_APPS)
File "/home/rishank/envs/py310env/lib/python3.10/site-packages/django/apps/registry.py", line 116, in populate
    app_config.import_models()
File "/home/rishank/envs/py310env/lib/python3.10/site-packages/django/apps/config.py", line 269, in import_models
    self.models_module = import_module(models_module_name)
File "/home/rishank/local/python310/lib/python3.10/importlib/__init__.py", line 126, in import_module
    return _bootstrap.gcd_import(name[level:], package, level)
File "<frozen importlib._bootstrap>", line 1050, in _gcd_import
File "<frozen importlib._bootstrap>", line 1027, in _find_and_load
File "<frozen importlib._bootstrap>", line 1006, in _find_and_load_unlocked
File "<frozen importlib._bootstrap>", line 688, in _load_unlocked
File "<frozen importlib._bootstrap_external>", line 883, in exec_module
File "<frozen importlib._bootstrap>", line 241, in _call_with_frames_removed
File "/home/rishank/envs/py310env/lib/python3.10/site-packages/django/contrib/auth/models.py", line 3, in <module>
    from django.contrib.auth.base_user import AbstractBaseUser, BaseUserManager
File "/home/rishank/envs/py310env/lib/python3.10/site-packages/django/contrib/auth/base_user.py", line 57, in <module>
    class AbstractBaseUser(models.Model):
File "/home/rishank/envs/py310env/lib/python3.10/site-packages/django/db/models/base.py", line 143, in _new__
    new_class.add_to_class("_meta", Options(meta, app_label))
File "/home/rishank/envs/py310env/lib/python3.10/site-packages/django/db/models/base.py", line 371, in add_to_class
    value.contribute_to_class(cls, name)
File "/home/rishank/envs/py310env/lib/python3.10/site-packages/django/db/models/options.py", line 243, in contribute_to_class
    self.db_table, connection.ops.max_name_length())
File "/home/rishank/envs/py310env/lib/python3.10/site-packages/django/utils/connection.py", line 15, in _getattr__
    return getattr(self._connections[self._alias], item)
File "/home/rishank/envs/py310env/lib/python3.10/site-packages/django/utils/connection.py", line 62, in _getitem__
    conn = self.create_connection(alias)
File "/home/rishank/envs/py310env/lib/python3.10/site-packages/django/db/utils.py", line 193, in create_connection
    backend = load_backend(db["ENGINE"])
File "/home/rishank/envs/py310env/lib/python3.10/site-packages/django/db/utils.py", line 113, in load_backend
    return import_module("%s.base" % backend_name)
File "/home/rishank/local/python310/lib/python3.10/importlib/__init__.py", line 126, in import_module
    return _bootstrap.gcd_import(name[level:], package, level)
File "/home/rishank/envs/py310env/lib/python3.10/site-packages/django/db/backends/sqlite3/base.py", line 9, in <module>
    from sqlite3 import dbapi2 as Database
File "/home/rishank/local/python310/lib/python3.10/sqlite3/__init__.py", line 57, in <module>
    from sqlite3.dbapi2 import *
File "/home/rishank/local/python310/lib/python3.10/sqlite3/dbapi2.py", line 27, in <module>
    from _sqlite3 import *
ModuleNotFoundError: No module named '_sqlite3'
Sentry is attempting to send 2 pending events
Waiting up to 2 seconds
Press Ctrl-C to quit
(py310env) rishank@stt:~/downloads/Python-3.10.11$ cd ~/downloads/

```

```

rishank@stt:~$ cd ~/downloads/Python-3.10.11
export LD_FLAGS="-L$HOME/local/sqlite/lib"
export CPP_FLAGS="-I$HOME/local/sqlite/include"
export LD_LIBRARY_PATH="$HOME/local/sqlite/lib:$LD_LIBRARY_PATH"

```

Configuring sqlite with python:

```

rishank@stt:~$ ./configure \
--prefix=$HOME/local/python310 \
--enable-loadable-sqlite-extensions \
--with-sqlite3=$HOME/local/sqlite \
--enable-optimizations

```

```

rishank@stt:~/downloads$ make clean
make -j$(nproc)
make install

```

```

rishank@stt:~/downloads$ ~/local/python310/bin/python3.10 -m venv ~/envs/py310env
source ~/envs/py310env/bin/activate

```

```

source ~/envs/py310env/bin/activate
(py310env) rishank@stt:~/downloads/Python-3.10.11$ python -c "import sqlite3; print(sqlite3.sqlite_version)"
3.45.0

```

```

3.45.0
(py310env) rishank@stt:~/downloads/Python-3.10.11$ pip install label-studio
Requirement already satisfied: label-studio in /home/rishank/envs/py310env/lib/python3.10/site-packages (1.15.0)

```

```
^C(py310env) rishank@stt:~/downloads/Python-3.10.11$ label-studio start
=> Database and media directory: /home/rishank/.local/share/label-studio
=> Static URL is set to: /static/
=> Database and media directory: /home/rishank/.local/share/label-studio
=> Static URL is set to: /static/
Read environment variables from: /home/rishank/.local/share/label-studio/.env
get 'SECRET_KEY' casted as '<class 'str'>' with default ''
Starting new HTTPS connection (1): pypi.org:443
https://pypi.org:443 "GET /pypi/label-studio/json HTTP/1.1" 200 33651
January 24, 2025 - 16:45:13
Django version 4.2.18, using settings 'label_studio.core.settings.label_studio'
Starting development server at http://0.0.0.0:8080/
Quit the server with CONTROL-C.
```

setting up host from the virtual machine to host machine for browsing:

```
rishanksoni — rishank@stt: ~ — ssh -L 8080:localhost:8080 rishank@localhost -p 2222 — 102x42
rishanksoni@Rishanks-MacBook-Air ~ % ssh -L 8080:localhost:8080 rishank@localhost -p 2222
rishank@localhost's password:
Welcome to Ubuntu 24.04.1 LTS (GNU/Linux 6.8.0-51-generic aarch64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/pro

System information as of Fri Jan 24 04:46:32 PM UTC 2025

System load:          0.19
Usage of /:            28.2% of 18.02GB
Memory usage:         34%
Swap usage:           0%
Processes:            93
Users logged in:      1
IPv4 address for enp0s8: 10.0.2.15
IPv6 address for enp0s8: fd00::a00:27ff:fec6:c82f

Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

Last login: Fri Jan 24 15:57:55 2025 from 10.0.2.2
rishank@stt:~$
```



Label Studio


A full-fledged open source solution for data labeling

Did you know?

Label Studio now has a Starter Cloud offering optimized for small teams and projects. [Learn more](#)



Brought to you by

 HumanSignal

Log in

Email Address

Password

☒ Keep me logged in this browser

Log in

Don't have an account? [Sign up](#)