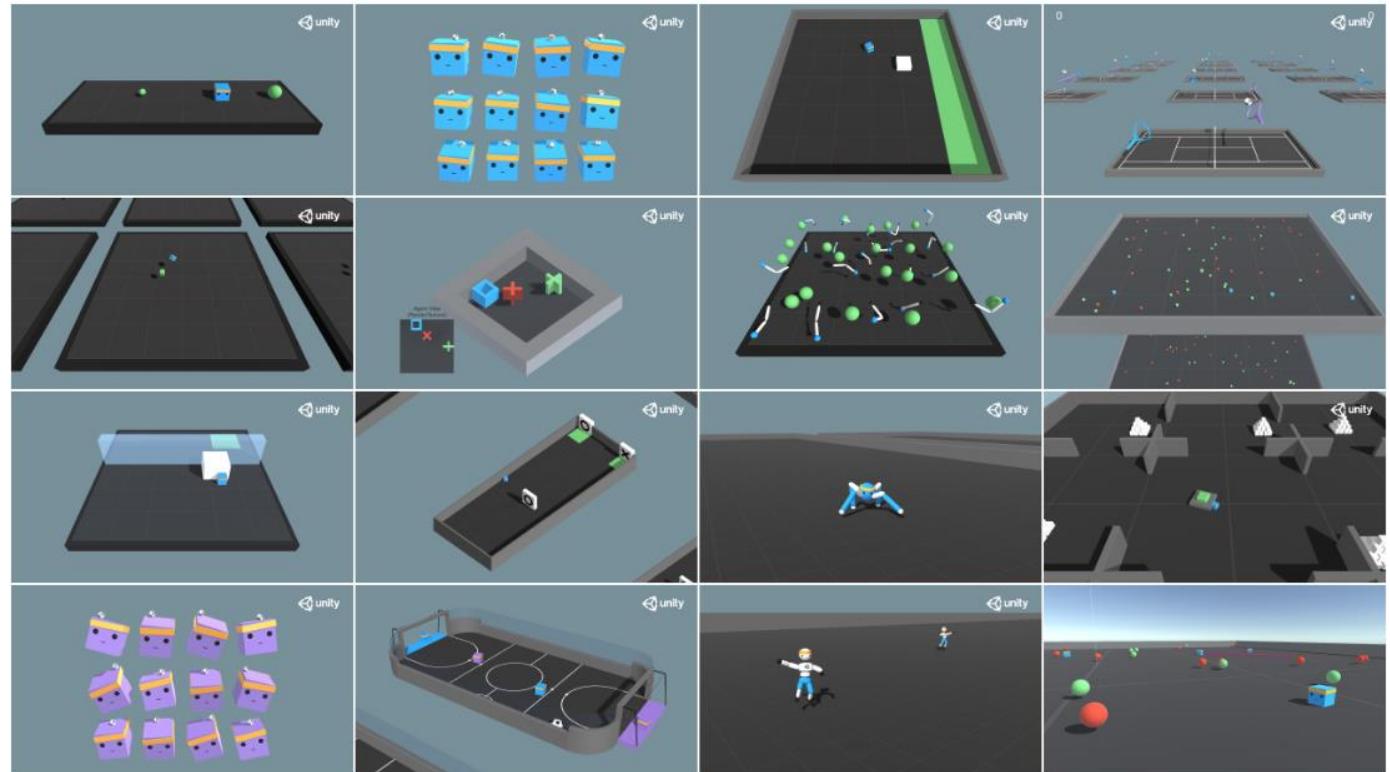


UNITY ML-AGENTS

SETUP



Unity ML-Agents Toolkit (Beta)

UNITY ML- AGENTS

Anaconda:

<https://docs.conda.io/projects/conda/en/latest/user-guide/install/index.html>

Unity installation:

<https://docs.unity3d.com/Manual/GettingStartedInstallingHub.html>

Cercate di scaricare sempre una delle ultime versioni



ANACONDA®



UNITY ML-AGENTS

In generale Andare al seguente Link: <https://github.com/Unity-Technologies/ml-agents>

The screenshot shows the GitHub repository page for 'Unity Technologies / ml-agents'. The page has a dark theme. At the top, there's a navigation bar with a search bar, pull requests, issues, marketplace, and explore links. Below the header, the repository name 'Unity Technologies / ml-agents' is displayed, along with metrics: 117 used by, 494 watchers, 7.4k stars, 1.9k forks, and 1.641 commits. The main content area shows a list of recent commits from various contributors, including 'chriselion', '.circleci', '.github', '.yamato', 'UnitySDK', 'config', 'demos', 'docs', 'gym-unity', 'ml-agents-envs', 'ml-agents', 'notebooks', 'protobuf-definitions', and 'unity-volume'. The commits are dated from yesterday to 2 years ago.

Contributor	Commit Message	Date
chriselion	Rename mlagents.envs to mlagents_envs (#3083)	yesterday
.circleci	Rename mlagents.envs to mlagents_envs (#3083)	yesterday
.github	Add TensorFlow version to bug report template (#2771)	2 months ago
.yamato	[yamato] Set triggers for any PR against a target branch. (#2848)	last month
UnitySDK	Rename mlagents.envs to mlagents_envs (#3083)	yesterday
config	Remove Standalone Offline BC Training (#2969)	4 days ago
demos	Longer demonstrations for ray perception (#2974)	20 days ago
docs	Rename mlagents.envs to mlagents_envs (#3083)	yesterday
gym-unity	Rename mlagents.envs to mlagents_envs (#3083)	yesterday
ml-agents-envs	Rename mlagents.envs to mlagents_envs (#3083)	yesterday
ml-agents	Rename mlagents.envs to mlagents_envs (#3083)	yesterday
notebooks	Rename mlagents.envs to mlagents_envs (#3083)	yesterday
protobuf-definitions	Rename mlagents.envs to mlagents_envs (#3083)	yesterday
unity-volume	[containerization] CPU based containerization to support all environm...	2 years ago

UNITY ML-AGENTS

Clikkare su release

Unity Technologies / ml-agents

Used by 117 Watch 494 Star 7.4k Fork 1.9k

Code Issues 114 Pull requests 16 Actions Projects 0 Security Insights

Unity Machine Learning Agents Toolkit <https://unity3d.ai>

reinforcement-learning unity3d deep-learning unity deep-reinforcement-learning neural-networks

1,641 commits 37 branches 0 packages 40 releases 90 contributors Apache-2.0

Branch: master New pull request Create new file Upload files Find file Clone or download

chriselion	Rename mlagents.envs to mlagents_envs (#3083)	Latest commit 54125ef yesterday
.circleci	Rename mlagents.envs to mlagents_envs (#3083)	yesterday
.github	Add TensorFlow version to bug report template (#2771)	2 months ago
.yamato	[yamato] Set triggers for any PR against a target branch. (#2848)	last month
UnitySDK	Rename mlagents.envs to mlagents_envs (#3083)	yesterday
config	Remove Standalone Offline BC Training (#2969)	4 days ago
demos	Longer demonstrations for ray perception (#2974)	20 days ago
docs	Rename mlagents.envs to mlagents_envs (#3083)	yesterday
gym-unity	Rename mlagents.envs to mlagents_envs (#3083)	yesterday
ml-agents-envs	Rename mlagents.envs to mlagents_envs (#3083)	yesterday
ml-agents	Rename mlagents.envs to mlagents_envs (#3083)	yesterday
notebooks	Rename mlagents.envs to mlagents_envs (#3083)	yesterday
protobuf-definitions	Rename mlagents.envs to mlagents_envs (#3083)	yesterday
unity-volume	[containerization] CPU based containerization to support all environm...	2 years ago

UNITY ML-AGENTS

Conviene sempre scegliere una release perche' se si riscontra un problema,
attraverso la community e' piu' facile risolvere i problemi

The screenshot shows a GitHub repository page for "Unity-Technologies / ml-agents". The top navigation bar includes links for "Pull requests", "Issues", "Marketplace", and "Explore". The repository header shows "Used by 117", "Watch 494", "Star 7.4k", "Fork 1.9k", and a "Code" button. Below the header, there are tabs for "Issues 114", "Pull requests 16", "Actions", "Projects 0", "Security", and "Insights". The "Releases" tab is currently selected. A specific release, "ML-Agents Beta 0.12.1", is highlighted as a "Pre-release". It was released 4 days ago by user "chriselion" with commit hash "298df2e". The release notes section, titled "Fixes & Performance Improvements", lists several bug fixes and improvements. The "Assets" section shows two files: "0.12.1.dev1" (3 days ago) and "337760f.zip" (tar.gz). The bottom of the page features a footer with links to "About", "Help", "Privacy", "Terms", and "GitHub Open Source".

Unity-Technologies / ml-agents

Used by 117 Watch 494 Star 7.4k Fork 1.9k

Code Issues 114 Pull requests 16 Actions Projects 0 Security Insights

Releases Tags

Pre-release

ML-Agents Beta 0.12.1

chriselion released this 4 days ago

0.12.1
298df2e

Fixes & Performance Improvements

- Fixed bug that could degrade training for recurrent networks ([#3066](#)). If you are on 0.12.0 and using LSTMs to train your agents, we recommend you upgrade to 0.12.1 and retrain your model.
- Fixed bug in the environment setup in a Jupyter notebook ([#3068](#))
- Added extra logging on API versions in port numbers, to help debugging connection issues ([#3069](#))
- Minor documentation fixes ([#3070](#))

Assets 2

0.12.1.dev1 ...
337760f zip tar.gz

3 days ago

UNITY ML-AGENTS

[https://github.com/Unity-
Technologies/ml-
agents/releases/tag/0.11.0](https://github.com/Unity-Technologies/ml-agents/releases/tag/0.11.0)

Download the Source Code from
the link

The screenshot shows the GitHub repository page for `Unity-Technologies / ml-agents`. The page displays the `0.11.0` pre-release tag. The release notes section, titled "Major Changes", lists several significant updates:

- The BroadcastHub has been deprecated. If there is a training Python process, all LearningBrains in the scene will automatically be trained. If there is no Python process, inference will be used.
- The Brain ScriptableObjects have been removed. The Brain Parameters are now on the Agent and are referred to as Behavior Parameters. Make sure the Behavior Parameters is attached to the Agent GameObject.
- The setup for visual observations has changed significantly.
 - Camera resolutions are no longer stored in the Brain Parameters.
 - AgentParameters no longer stores lists of Cameras and RenderTextures.
 - To add visual observations to an Agent, you must now attach a CameraSensorComponent or RenderTextureComponent to the agent. The corresponding Camera or RenderTexture can be added to these in the editor, and the resolution and color/grayscale is configured on the component itself.
- The definition of the gRPC service has changed.
- The online BC training feature has been removed.

Below the major changes, there is a note about migrating from 0.10.x to 0.11.0 and links to the [Migration Guide](#) and updated [Getting Started](#) and [Basic Guide](#).

The "Minor Fixes and Improvements" section lists several bug fixes and improvements:

- Fixed an exception being thrown when dragging between two screens with different DPIs ([#2782](#))
- Improved hyperparameters for the GridWorld environment using SAC ([#2776](#))
- Fixed crash when SAC is used with Curiosity and Continuous Actions ([#2740](#))
- Sped up processing large vector observations ([#2717](#))
- Fixed bug causing excessive memory usage during inference ([#2722](#))
- Added support for multiple training areas in the GridWorld environment ([#2721](#))
- RayPerception.Perceive() was made abstract and RayPerception2D now correctly overrides it. ([#2788](#))

At the bottom of the page, there is a section for "Assets" containing two download links:

- [Source code \(zip\)](#)
- [Source code \(tar.gz\)](#)

UNITY ML-AGENTS

```
Anaconda Prompt

(base) C:\Users\ak12>cond env list
'cond' is not recognized as an internal or external command,
operable program or batch file.

(base) C:\Users\ak12>conda env list
# conda environments:
#
base          *  C:\Users\ak12\Anaconda3
bpsproxy      C:\Users\ak12\Anaconda3\envs\bpsproxy
coco_test     C:\Users\ak12\Anaconda3\envs\coco_test
coco_test2    C:\Users\ak12\Anaconda3\envs\coco_test2
cocosynth     C:\Users\ak12\Anaconda3\envs\cocosynth
ml-agents     C:\Users\ak12\Anaconda3\envs\ml-agents
ml-agents_0.10.1 C:\Users\ak12\Anaconda3\envs\ml-agents_0.10.1
ml-agents_0.6   C:\Users\ak12\Anaconda3\envs\ml-agents_0.6
ml-agents_0.8   C:\Users\ak12\Anaconda3\envs\ml-agents_0.8
ml-agents_0.9   C:\Users\ak12\Anaconda3\envs\ml-agents_0.9
mla_0.11       C:\Users\ak12\Anaconda3\envs\mla_0.11
mlagents_0.10  C:\Users\ak12\Anaconda3\envs\mlagents_0.10
mlatest        C:\Users\ak12\Anaconda3\envs\mlatest
mrcnn-course   C:\Users\ak12\Anaconda3\envs\mrcnn-course
tf-gpu         C:\Users\ak12\Anaconda3\envs\tf-gpu
tf2            C:\Users\ak12\Anaconda3\envs\tf2

(base) C:\Users\ak12>conda create -n ml-agents_0.11.0 python=3.7
```

- Anaconda Setup Environment to train:
 - Aprire l'Anaconda Prompt
 - Creare un environment con il seguente comando:
 - conda create -n ml-agents_0.11.0 python=3.7
 - E premere invio

UNITY ML-AGENTS

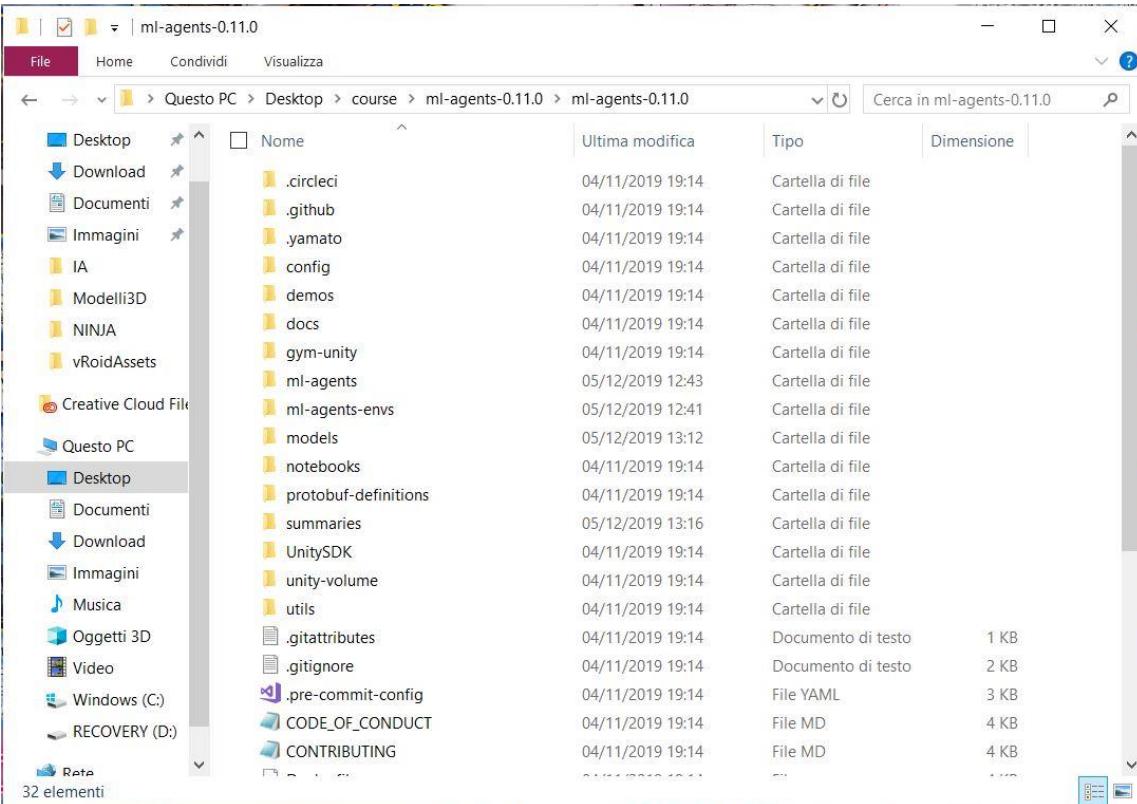
```
Select Anaconda Prompt
certifi          pkgs/main/win-64::certifi-2019.9.11-py37_0
openssl         pkgs/main/win-64::openssl-1.1.1d-he774522_3
pip             pkgs/main/win-64::pip-19.3.1-py37_0
python           pkgs/main/win-64::python-3.7.5-h8c8aaef0_0
setuptools       pkgs/main/win-64::setuptools-41.6.0-py37_0
sqlite           pkgs/main/win-64::sqlite-3.30.1-he774522_0
vc               pkgs/main/win-64::vc-14.1-h8510ff6_4
vs2015_runtime   pkgs/main/win-64::vs2015_runtime-14.16.27012-hf0eaf9b_0
wheel            pkgs/main/win-64::wheel-0.33.6-py37_0
wincertstore    pkgs/main/win-64::wincertstore-0.2-py37_0

Proceed ([y]/n)? y

Preparing transaction: done
Verifying transaction: done
Executing transaction: done
#
# To activate this environment, use
#
#     $ conda activate ml-agents_0.11.0
#
# To deactivate an active environment, use
#
#     $ conda deactivate

(base) C:\Users\ak12>conda activate ml-agents_0.11.0
(ml-agents_0.11.0) C:\Users\ak12>
```

- Anaconda Setup Environment to train:
- conda activate ml-agents_0.11.0
 - (spoiler: prima di poter addestrare il vostro agente dovete sempre utilizzare questo comando)



The screenshot shows a web browser displaying the 'Basic Guide' page for Unity ML-Agents. The page includes the following sections:

- Notes:**
 - We do not currently support Python 3.5 or later.
 - If you are using Anaconda and are having trouble with TensorFlow in an Anaconda environment, see [this note](#).
- Installing for Development**

If you intend to make modifications to the `ml-agents` repo rather than from PyPi. To do this, you will need to clone the repository and install it in your local environment. To do this, you will need to run the following command in a terminal window:

```
cd ml-agents-envs
pip3 install -e ./
cd ..
cd ml-agents
pip3 install -e ./
```

Running pip with the `-e` flag will let you make modifications to the `ml-agents` codebase. It is important to install the `ml-agents-envs` package in the other environment, as well.
- Next Steps**

The Basic Guide page contains several short tutorials for getting started with ML-Agents, including how to train a simple model, in addition to building and running a reinforcement learning agent.
- Help**

If you run into any problems regarding ML-Agents, refer to our [FAQ](#) and our [Limitations](#) pages. If you can't find anything, please [submit an issue](#) and make sure to cite relevant information on OS, Python version, and exact error message.

UNITY ML-AGENTS

Cambiare cartella con il comando `cd`
Dove avete messo il source code scaricato precedentemente

dependencies include:

- TensorFlow (Requires a CPU w/ AVX support)
- Jupyter

Notes:

- We do not currently support Python 3.5 or 3.6.
- If you are using Anaconda and are having trouble installing TensorFlow in an Anaconda environment, see this [issue](#).

Installing for Development

If you intend to make modifications to the `ml-agents` repo rather than from PyPi, To do this, you will need to clone the repo's root directory, run:

```
cd ml-agents-envs
pip3 install -e ./
cd ..
cd ml-agents
pip3 install -e ./
```

Running pip with the `-e` flag will let you make changes to `mlagents`, `mlagents-learn`. It is important to install the `mlagents-envs`, and installing it in the other two repos.

Next Steps

```
16 File(s)      36,631 bytes
16 Dir(s)  35,606,802,432 bytes free
```

The Basic Guide page contains several short tutorials on how to build and train a trained model, in addition to building and training your own.

```
(ml-agents_0.11.0) C:\Users\ak12\Desktop\course\ml-agents-0.11.0>cd ml-agents-envs
```

Help

If you run into any problems regarding ML-Agents, refer to our [FAQ](#) and our [Limitations](#) pages. If you can't find anything please [submit an issue](#) and make sure to cite relevant information on OS, Python version, and exact error message.

- Dare I seguenti comandi:
- cd ml-agentes-envs
- pip install -e ./
- Premere Invio

UNITY ML-AGENTS

Managing environments — ml-agents Basic Guide

By installing the `mlagents` package, the dependencies listed in the `setup.py` file are also installed. Some of the primary dependencies include:

- TensorFlow (Requires a CPU w/ AVX support)
- Jupyter

Notes:

- We do not currently support Python 3.5 or earlier.
- If you are using Anaconda and are having trouble installing TensorFlow in an Anaconda environment, see [this issue](#).

Installing for Development

If you intend to make modifications to the `ml-agents` repo rather than from PyPi. To do this, you will need to clone the repo's root directory, run:

```
cd ml-agents-envs
pip3 install -e .
cd ..
cd ml-agents
pip3 install -e ./
```

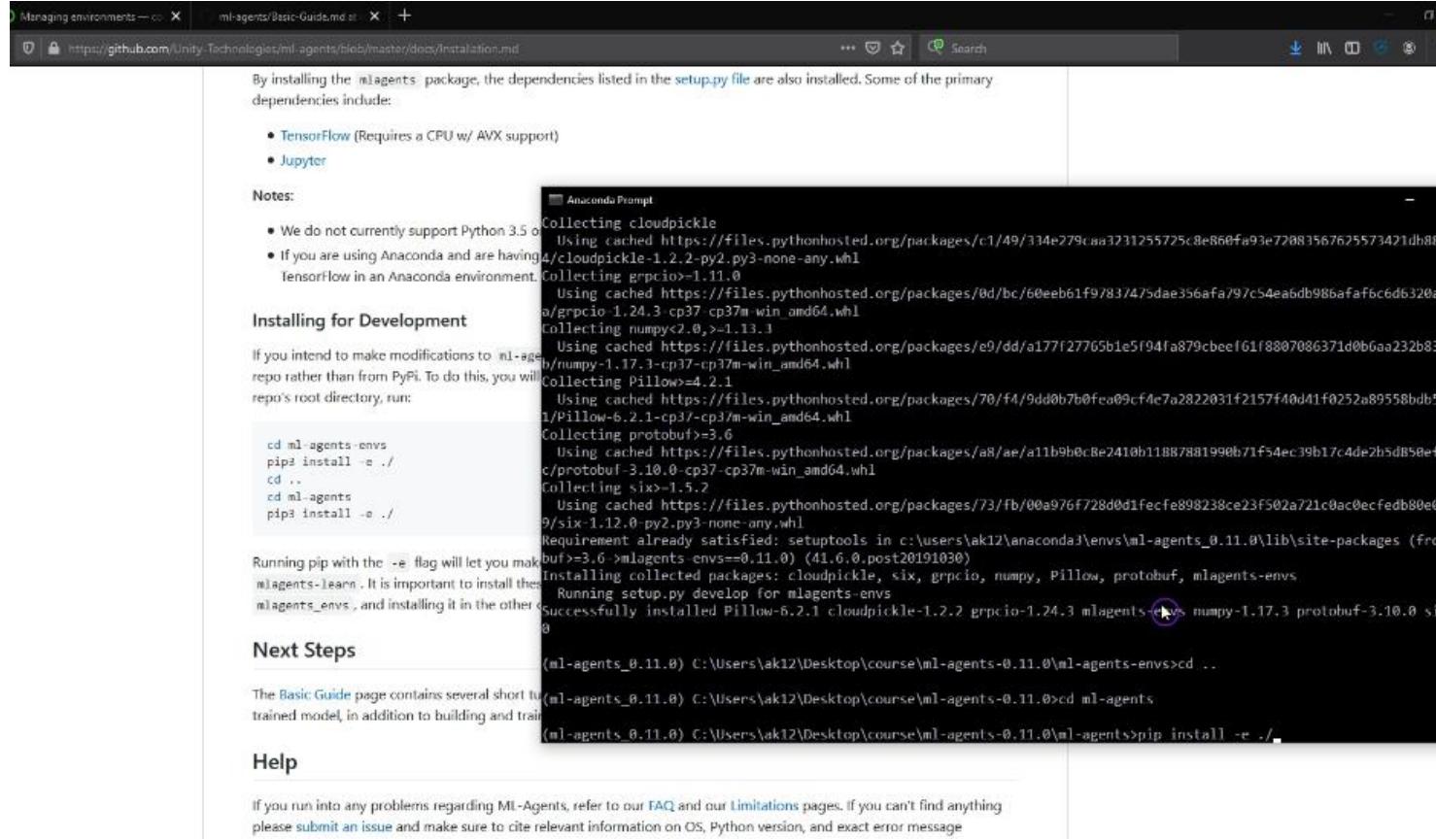
Running pip with the `-e` flag will let you make changes to the `ml-agents-learn`. It is important to install these `mlagents-envs`, and installing it in the other `mlagents-envs`.

Next Steps

The Basic Guide page contains several short tutorials for training a trained model, in addition to building and training your own.

Help

If you run into any problems regarding ML-Agents, refer to our [FAQ](#) and our [Limitations](#) pages. If you can't find anything please submit an issue and make sure to cite relevant information on OS, Python version, and exact error message.



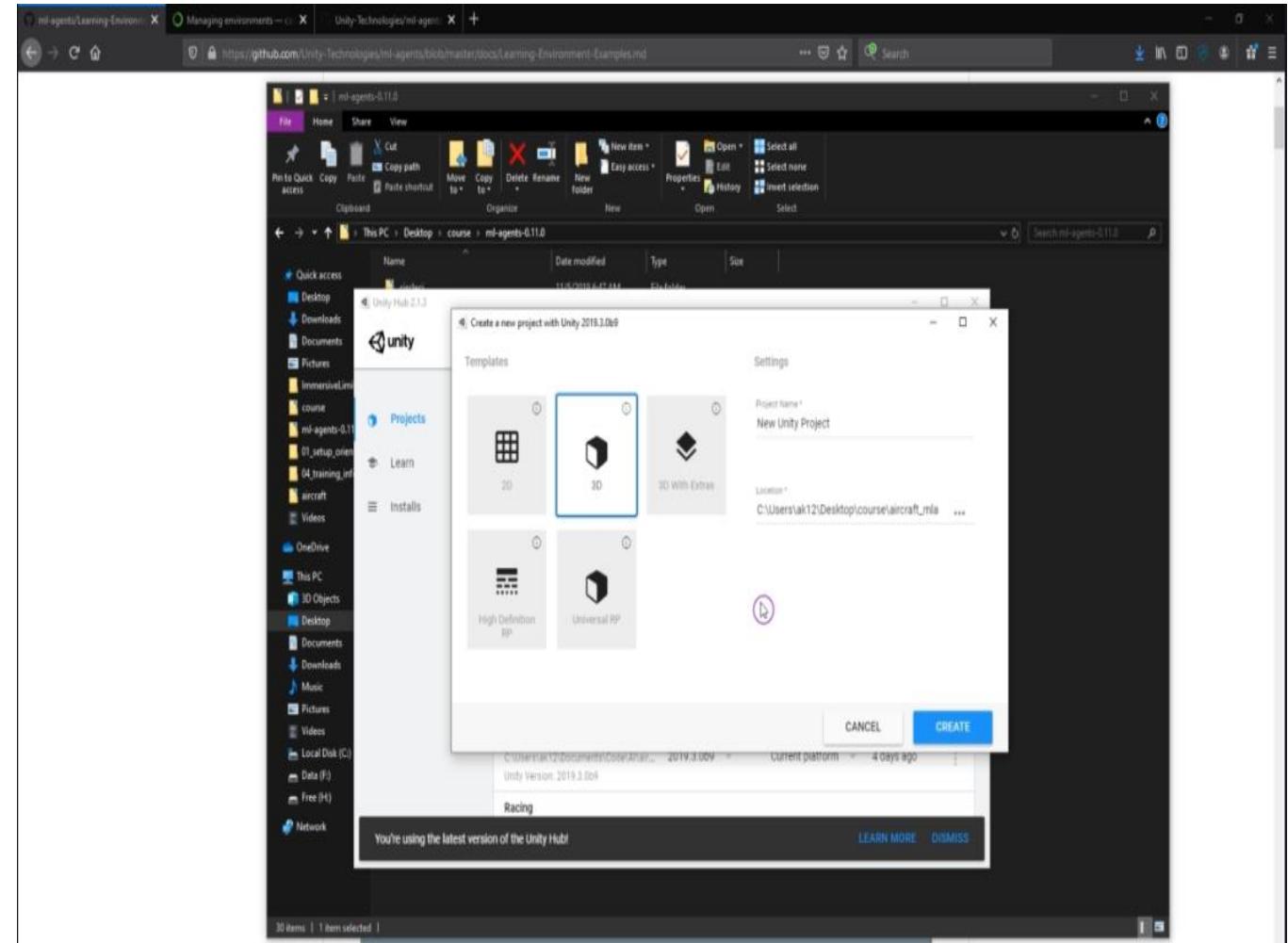
- A questo punto una volta installato eseguite questi 3 comandi in ordine:
 - cd ..
 - cd ml-agents
 - Pip install –e ./
- Premere invio

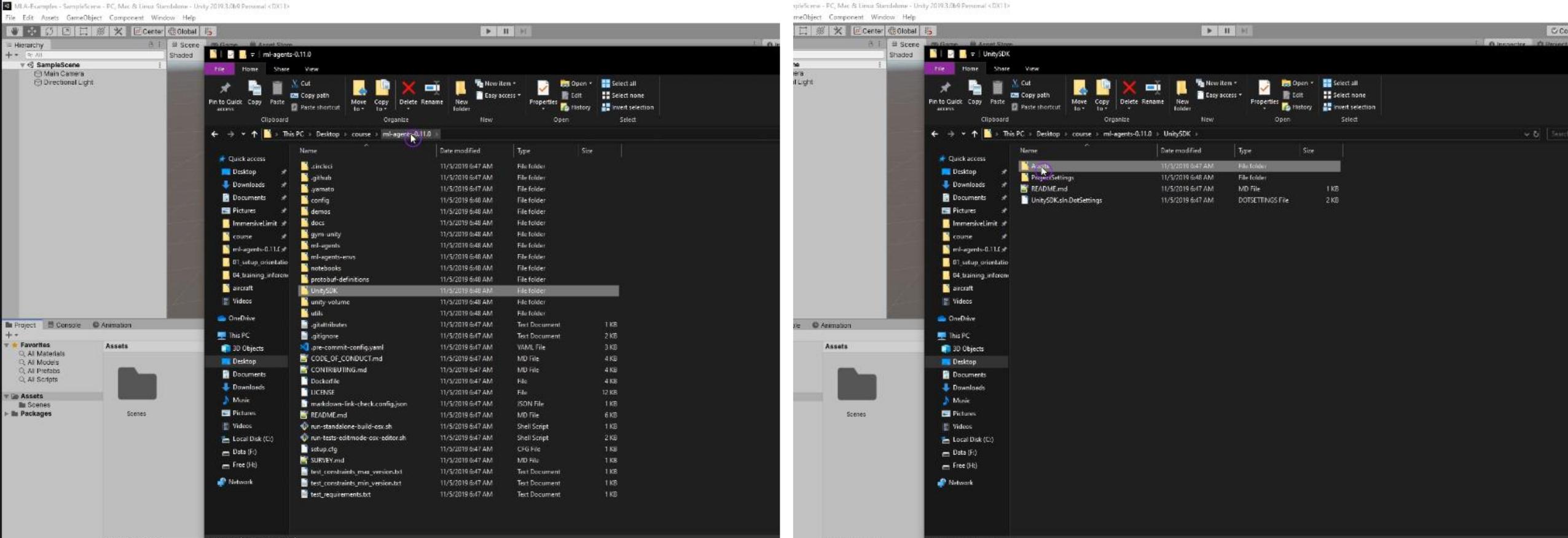


UNITY ML-AGENTS

Se e' andato tutto bene
COMPLIMENTI!!!!!!!

Creare un nuovo progetto su
Unity





UNITY ML-AGENTS

Adesso aprite la cartella dove avete messo il SourceCode scaricato! Clikkate su UnitySdk e dopo di che clikkate sulla Cartella Assets



UNITY ML-AGENTS

Adesso fate un bel drag and drop della cartella ML-Agents dentro il vostro progetto Unity e siamo finalmente pronti per fare il training!!!!