

NY Magic Leap Meetup

A pair of black Magic Leap AR glasses is shown from a top-down perspective. The right lens features a vibrant rainbow spectrum reflection, while the left lens shows a more muted, blue-tinted reflection. The glasses are set against a dark background, and their reflection is visible on a light-colored surface below.

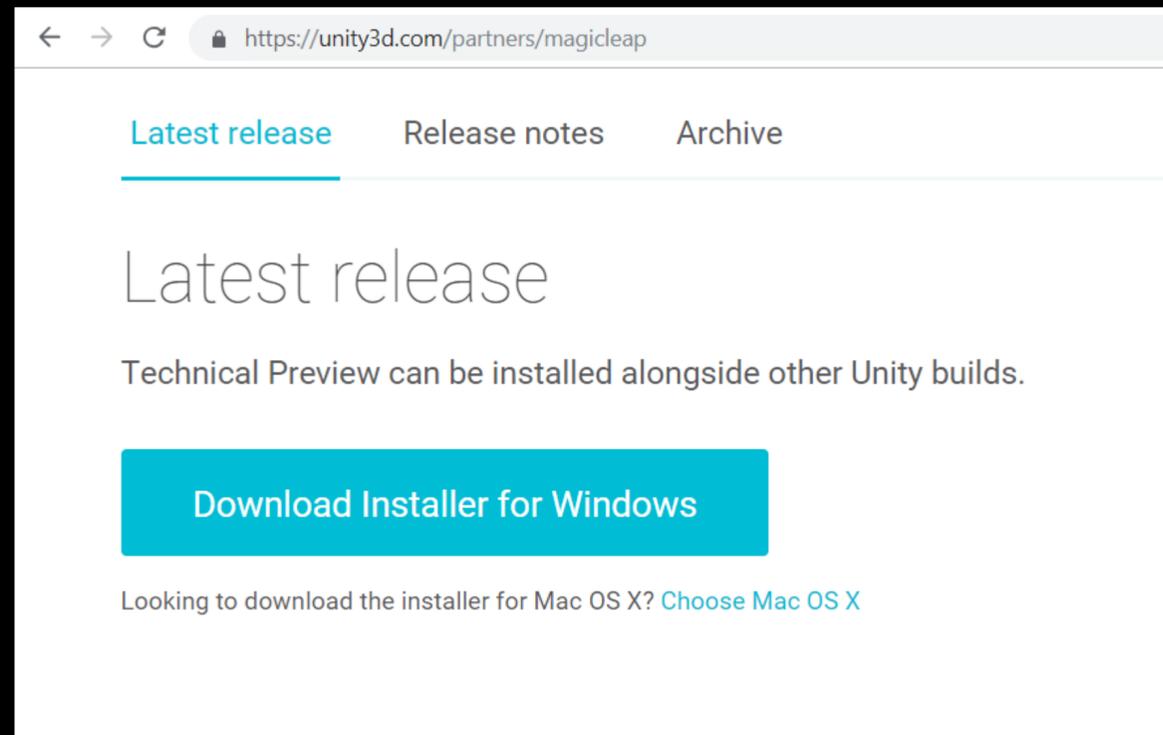
Development Practices on the Magic Leap

January 16, 2019

Magic Leap Environment

- Use specific Magic Leap Builds of Unity
- Install ML Package Manager
- Configure Magic Leap App in Unity
- Set up testing environment

Install special version of Unity

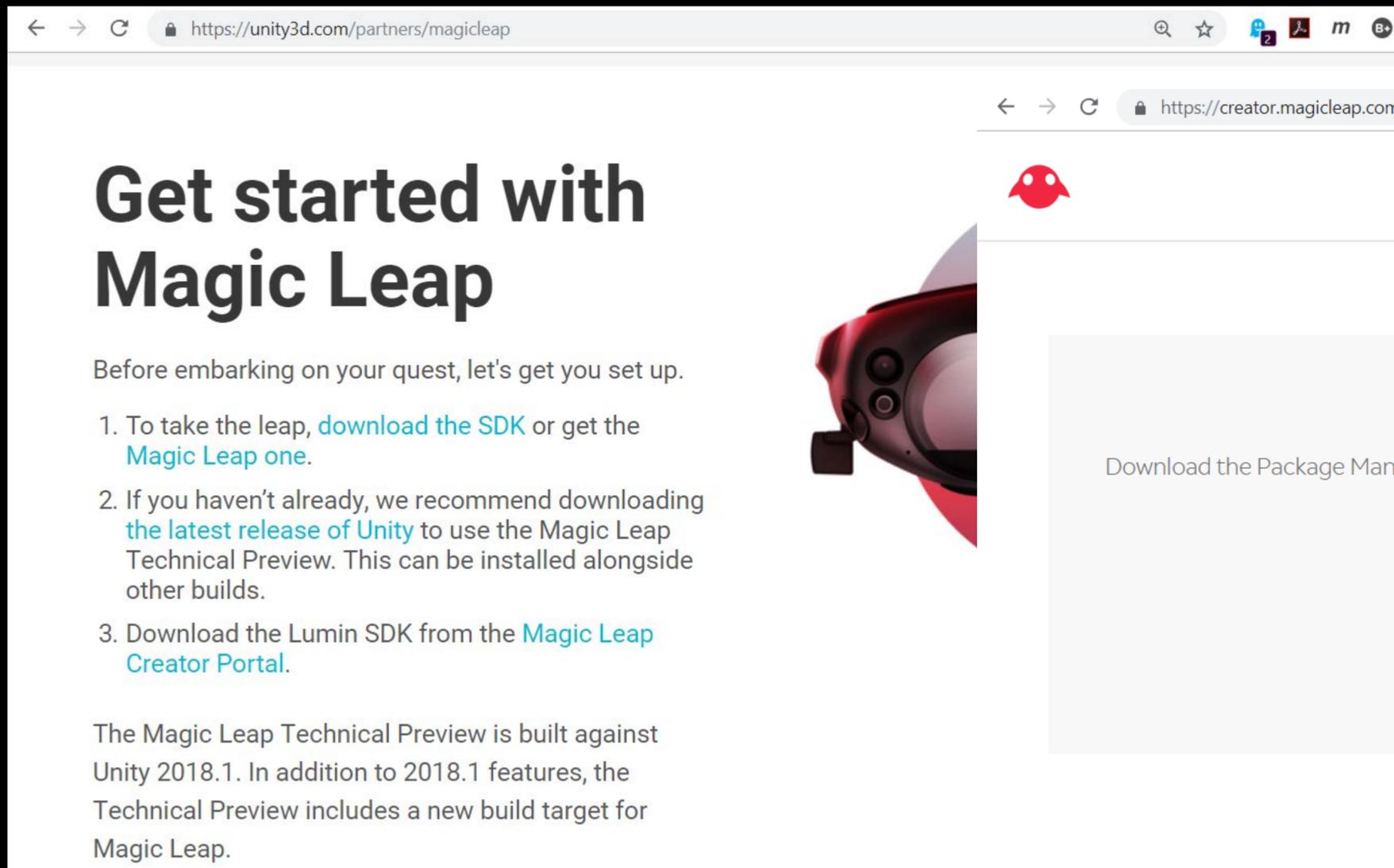


- Special build of Unity 2018.1.9 with Magic Leap Integration available from the Unity Partners page (<https://unity3d.com/partners/magicleap>)
- Magic Leap will be native in Unity 2019.1



Download SDK/Package Manager

- <https://creator.magicleap.com/downloads/lumin-sdk/unity>



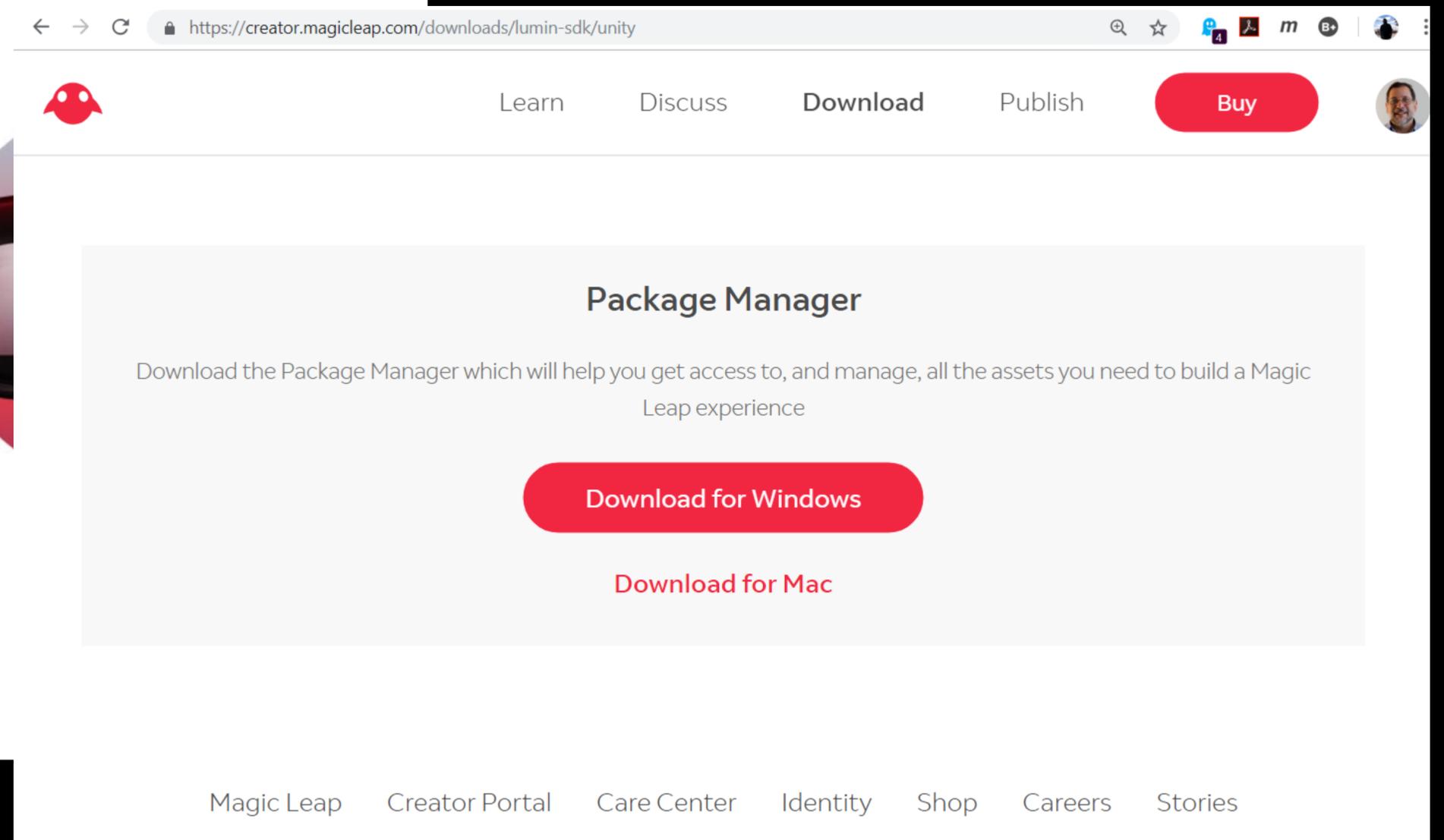
← → ↻ <https://unity3d.com/partners/magicleap> 🔍 ☆ 🌐 📄 m B+

Get started with Magic Leap

Before embarking on your quest, let's get you set up.

1. To take the leap, [download the SDK](#) or get the [Magic Leap one](#).
2. If you haven't already, we recommend downloading [the latest release of Unity](#) to use the Magic Leap Technical Preview. This can be installed alongside other builds.
3. Download the Lumin SDK from the [Magic Leap Creator Portal](#).

The Magic Leap Technical Preview is built against Unity 2018.1. In addition to 2018.1 features, the Technical Preview includes a new build target for Magic Leap.



← → ↻ <https://creator.magicleap.com/downloads/lumin-sdk/unity> 🔍 ☆ 🌐 📄 m B+ 🌐

Learn Discuss Download Publish Buy

Package Manager

Download the Package Manager which will help you get access to, and manage, all the assets you need to build a Magic Leap experience

[Download for Windows](#)

[Download for Mac](#)

Magic Leap Creator Portal Care Center Identity Shop Careers Stories

Magic Leap Package Manager

The screenshot displays the Magic Leap Package Manager interface. On the left, there are three sections: 'Common Packages', 'Lessons and Tutorial Projects', and 'Lumin Runtime Packages'. The 'Common Packages' section contains a table with columns for Package, Latest Version, and Installed. The 'Lumin SDK' package is highlighted with a red circle, showing version 0.18.0 installed. The right panel shows details for 'Lumin SDK 0.18.0', including a description, features, and improvements. A red arrow points to the 'Open Shell' button in the bottom right of the details panel.

Package	Latest Version	Installed
Lumin SDK	0.19.0	0.18.0
Lumin SDK	0.19.0	0.17.0
C API Documentation	0.19.0	0.18.0
C API Documentation	0.19.0	0.17.0
Power and Thermal Profiler	1.0.0.20181206	1.0.0.20180809
Tegra Graphics Debugger	2.6.24421395-P	✓
NVIDIA Nsight Systems	2018.0.3.10-f3db474-P	✓
Visual Studio Code Extension	0.9.7	✓
Visual Studio 2017 Extension	1.0.181012	1.0.180720

Package	Latest Version	Installed
Magic Kit Lessons		
Goat_Labs Developer Samples		
Learning Resources Samples		

Package	Latest Version	Installed
Lumin Runtime Documentation	0.19.0	0.18.0
Lumin Runtime Documentation	0.19.0	0.17.0
Lumin Runtime Editor	0.19.0	0.18.0

Lumin SDK
Available versions: 0.18.0
Uninstall
0.41 GB (1.1 GB extracted)

Lumin SDK 0.18.0

Magic Leap's hardware and software is in a qualified developer release state right now. Some features or functionality of the Magic Leap hardware or software may not be available, may contain bugs or other defects, and/or may experience delays or failures. Please take a close look at this document since it contains valuable guidance on the current state of Magic Leap's hardware and software to help developers make the best possible use of the platform during our pre-release period. Want to know more? Head to the forums on our developer portal for more guidance.

Features

C API

Improvements

- Definitions for MLMediaFormat_Key_'s are now properly exposed for linking
- Introduced the MLContacts API, for address book functionality
- Introduced new ML Graphics Timewarp Stabilization Depth API, to give you more fine grained control over the depth timewarp uses to pivot
- Introduced new ML Graphics Projection models that can support a number of different render APIs

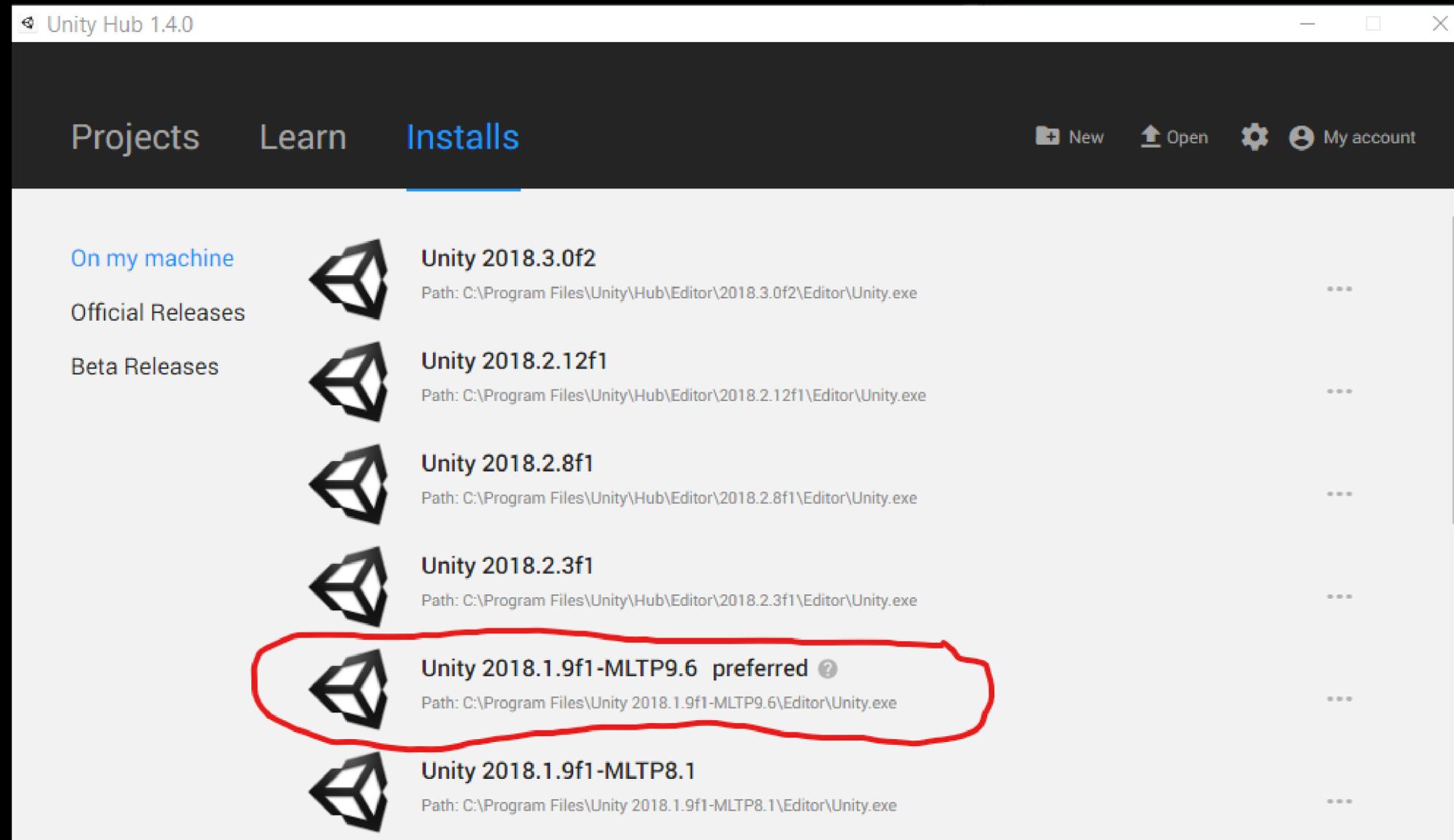
Open Release Notes Open the Release Notes externally in a browser

Open Folder Open the SDK folder in a file browser

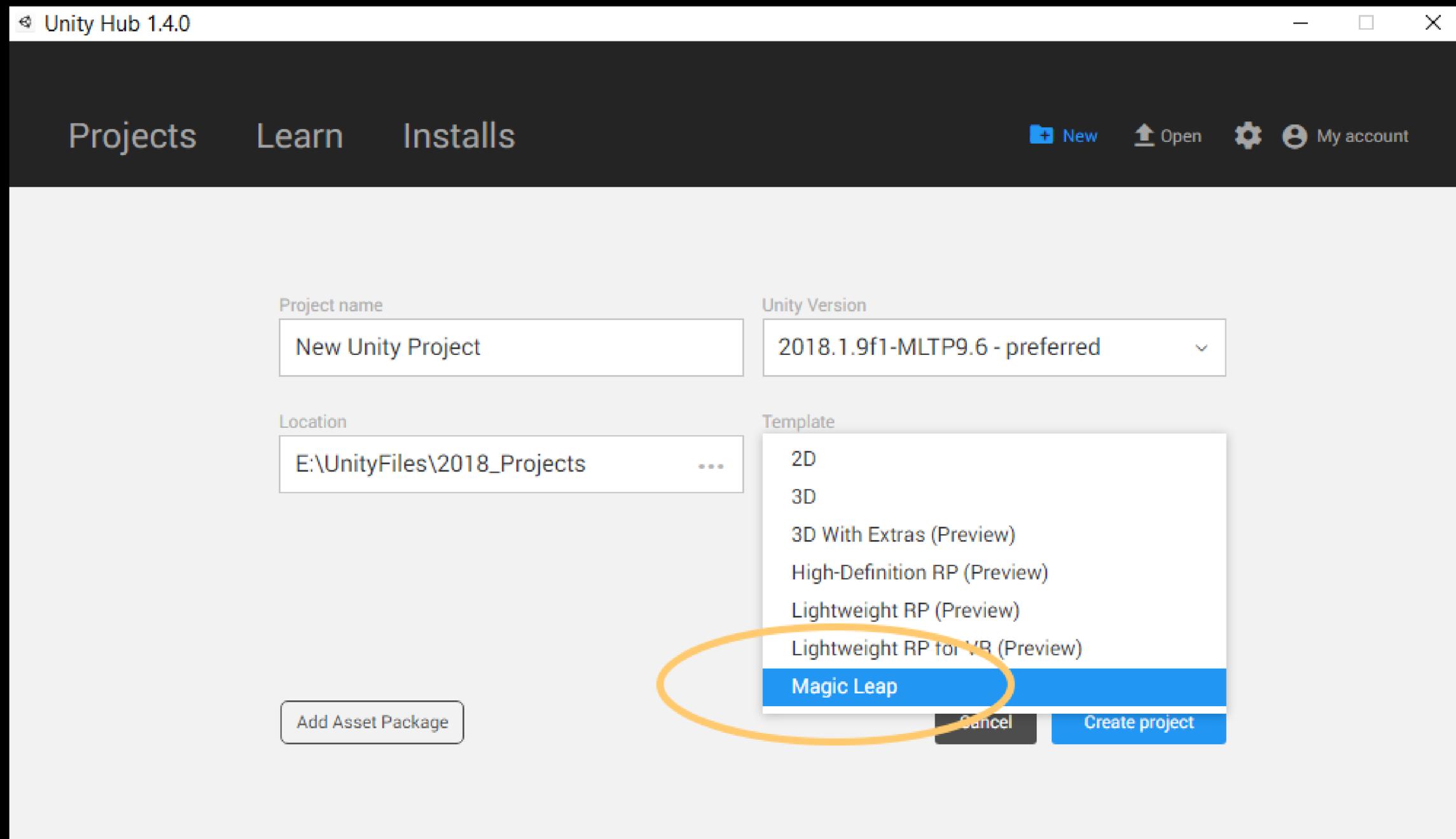
Open Shell Open a cmd.exe prompt in the SDK folder

Use ML Remote Launch the frontend for zero iteration

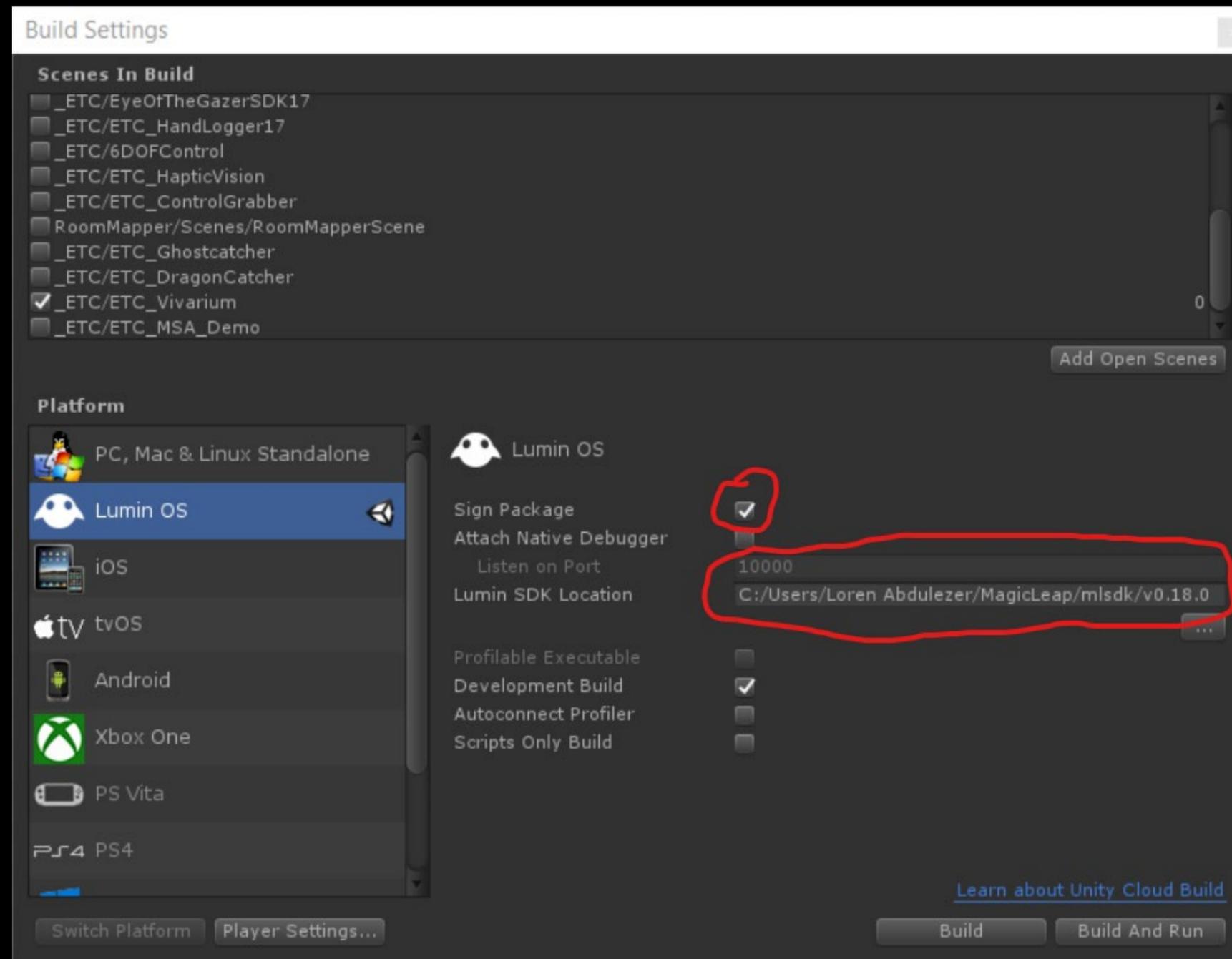
Set Unity Install for ML Builds



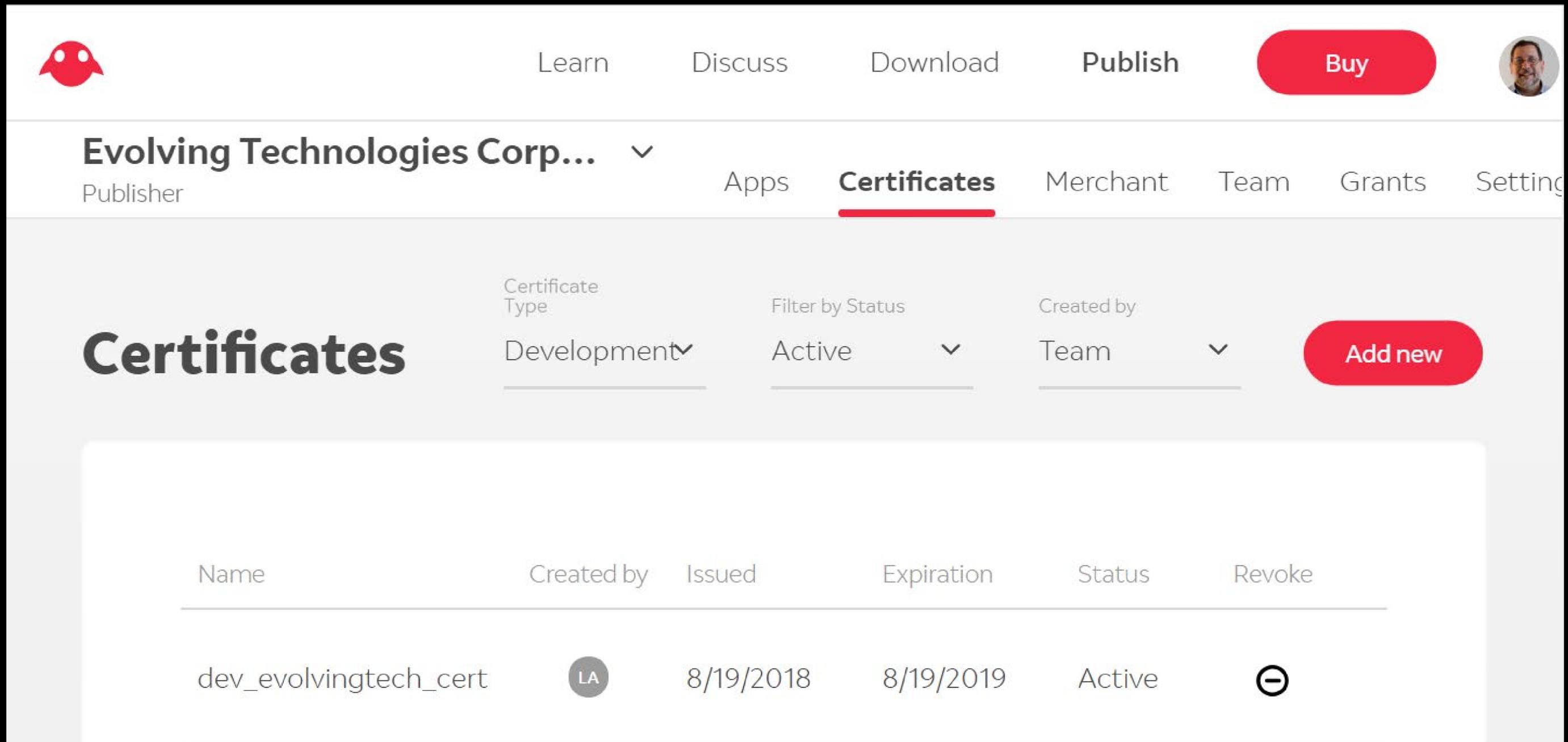
Assign Magic Leap Template



Set SDK Location in Build Settings



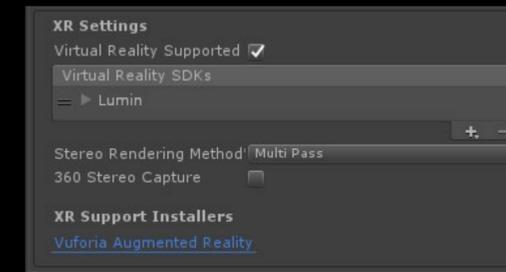
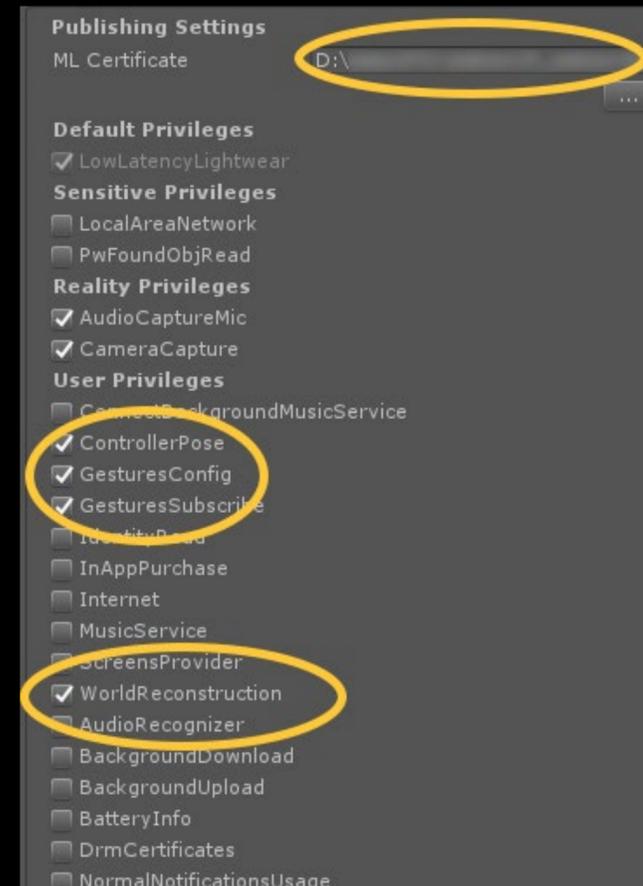
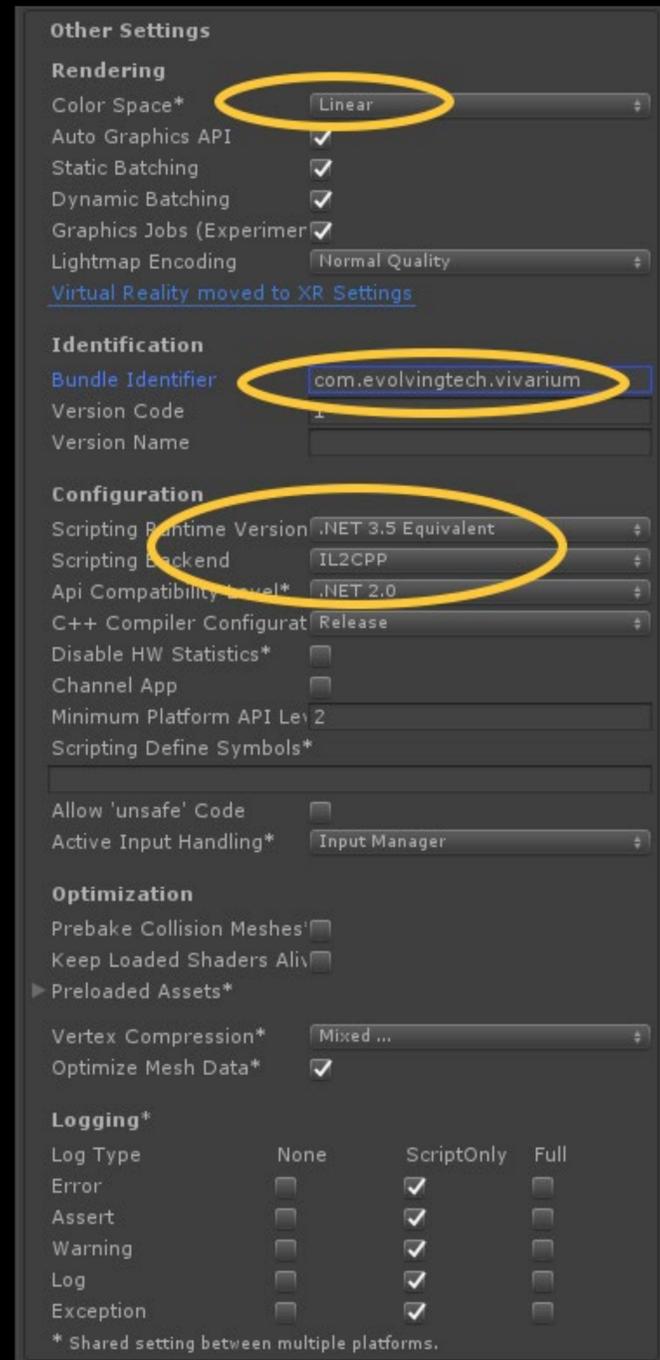
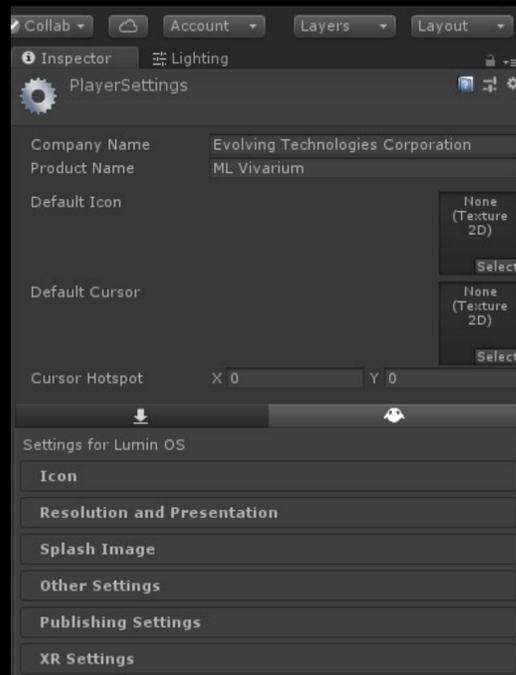
Add Developer Certificate



The screenshot shows the developer console interface for Evolving Technologies Corp. The top navigation bar includes links for Learn, Discuss, Download, Publish, and a prominent red Buy button. The user's profile picture is visible in the top right. The main navigation menu shows the current publisher as Evolving Technologies Corp. and the active section as Certificates, with other options like Apps, Merchant, Team, Grants, and Settings. The Certificates section features a title, a filter for Certificate Type (Development), a status filter (Active), and a filter for Created by (Team). A red Add new button is present. Below the filters is a table with one certificate entry.

Name	Created by	Issued	Expiration	Status	Revoke
dev_evolvingtech_cert	LA	8/19/2018	8/19/2019	Active	⊖

Unity Player Settings



Launch ML Remote

The screenshot shows the Magic Leap Remote - Device Mode application. At the top, there is a title bar with the application name and window controls. Below the title bar, the main interface features a header with the Magic Leap logo and the text "Magic Leap Remote *". A status bar indicates "Magic Leap Remote Server" is active, with a green dot and two buttons: "Start Simulator" and "Start Device". The main area is titled "Device Mapping" and contains a table with columns for various device features. The first row shows a device named "ML1 (*)" with a green status dot and a "connected : ZI st..." label. All feature columns for this device have checkmarks, indicating they are enabled.

Status	Name	Audio	Head	Eye	Gestures	Hands	Lifecycle	Input	Room	Graphics	Mesh	Planes	Ray	PCFs
●	ML1 (*) connected : ZI st...	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓

MLDB Utility

```
C:\Windows\system32\cmd.exe

C:\Users\Loren Abdulezer\MagicLeap\mlsdk\v0.18.0>mldev devices
List of devices attached
G8206M002148 device

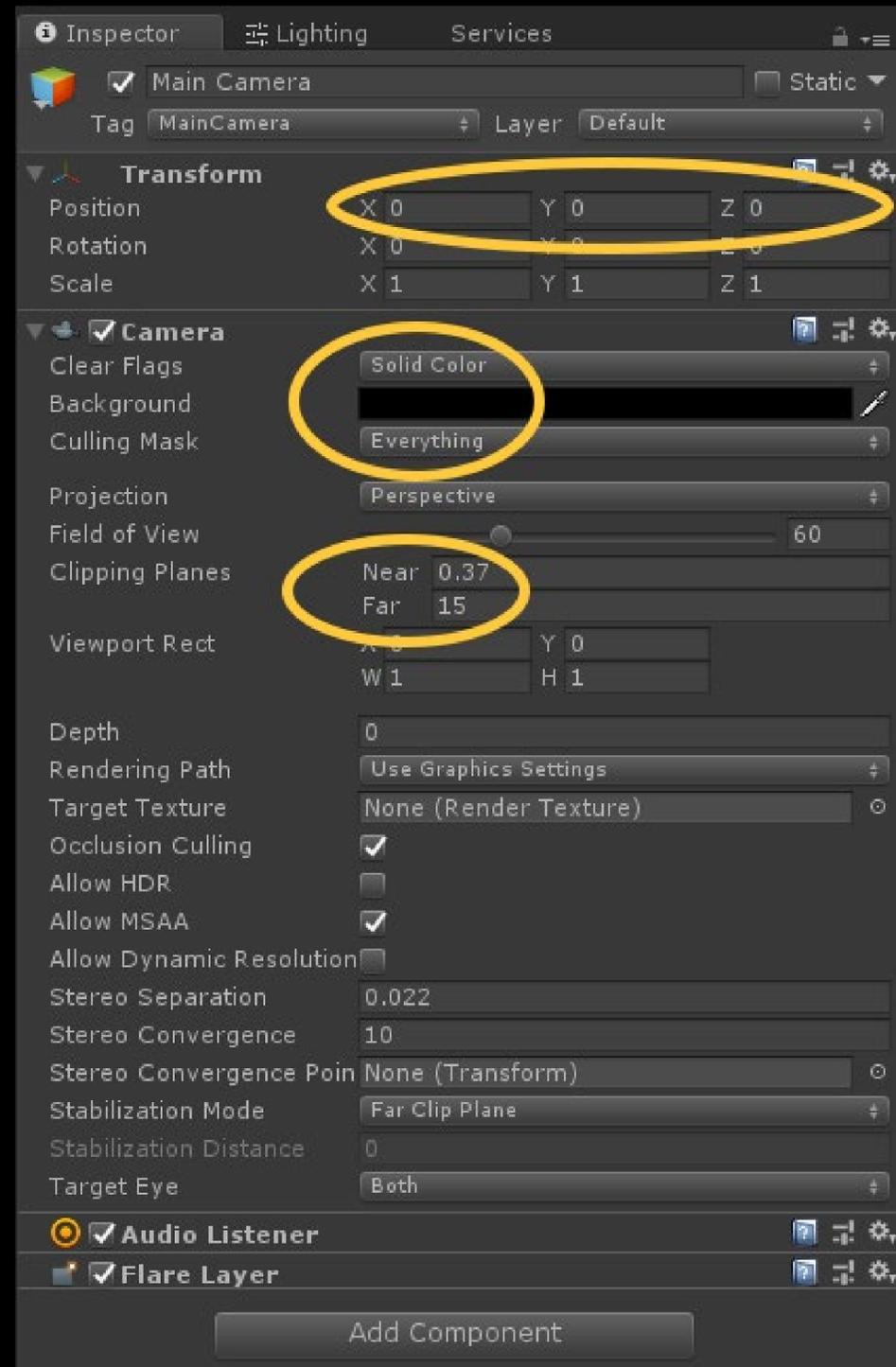
C:\Users\Loren Abdulezer\MagicLeap\mlsdk\v0.18.0>mldev packages
Package Name Version Debug Components
com.cheddar.live Cheddar 1 false Universe:.cheddar.universe
com.dotty.meshing DottyMesh 90 false Fullscreen:.fullscreen
com.evolvingtech.aivn A.I.V.N 1 false Fullscreen:.fullscreen
com.evolvingtech.aivnmvp AIVN_MVP 14 false Fullscreen:.fullscreen
com.evolvingtech.basicmeshing Basic Meshing 1 false Fullscreen:.fullscreen
com.evolvingtech.etcdragoncatcher Dragon Catcher 1 true Fullscreen:.fullscreen
com.evolvingtech.etcghostcatcher Ghost Catcher 1 true Fullscreen:.fullscreen
com.evolvingtech.etchcontrolgrabber Ctrl Grabber 1 true Fullscreen:.fullscreen
com.evolvingtech.etcroommapper MapToBegin 1 true Fullscreen:.fullscreen
com.evolvingtech.etcvivarium Vivarium 1 true Fullscreen:.fullscreen
com.evolvingtech.eyeofthegazer17 EyeGazer17 1 true Fullscreen:.fullscreen
com.evolvingtech.handlogger Hand Tracker 1 true Fullscreen:.fullscreen
com.evolvingtech.handlogger17 Hand Gestures 17 1 true Fullscreen:.fullscreen
com.evolvingtech.imagetracker Image Tracker 1 true Fullscreen:.fullscreen
com.evolvingtech.magicleaptest.mlheadlock ETC Showcase 1 false Fullscreen:.fullscreen
com.evolvingtech.measure Measure 1 false Fullscreen:.fullscreen
com.evolvingtech.staticpersistence Static Persist 1 true Fullscreen:.fullscreen
com.evovx.relaycars RelayCars 1 false Fullscreen:.fullscreen
com.lowes.endlessaisle Showroom 1 false Fullscreen:.fullscreen
com.magicleap.abductor_unity Abductor 3 false Fullscreen:.fullscreen
com.magicleap.dodge Dodge 1 false Fullscreen:.fullscreen
com.magicleap.glds0 GLDS0 1 false Fullscreen:.fullscreen
com.magicleap.helio Helio 1 false Universe:.universe
com.magicleap.invaders DrGInvaders 4 false Fullscreen:.fullscreen
com.magicleap.musicwidget Music 1 false Universe:.musicplayer
com.magicleap.screens.instructional Instructional 10 false ScreensImmersive:.fullscreen
com.magicleap.wallpaper Wallpaper 16 false Screens:.universe
com.magicleap.whales Whales 16 false Screens:.universe
com.magicleap.zi_server ML Remote Zero Iteration Server 18 false Fullscreen:.fullscreen
com.magicleapstudios.create Create 13 false Fullscreen:.fullscreen
com.magicleapstudios.tonandi Tónandi 10 false Fullscreen:.fullscreen
com.nba.nbeta NBA Beta 12 false ScreensImmersive:.fullscreen
com.resolutiongames.abfps.magicleap Angry Birds FPS 1 false Fullscreen:.fullscreen
com.sennheiser.ambeolab AMBEO Lab 101 false Fullscreen:.fullscreen
com.wayfair.spaces Wayfair 2 false Fullscreen:.fullscreen

C:\Users\Loren Abdulezer\MagicLeap\mlsdk\v0.18.0>
```

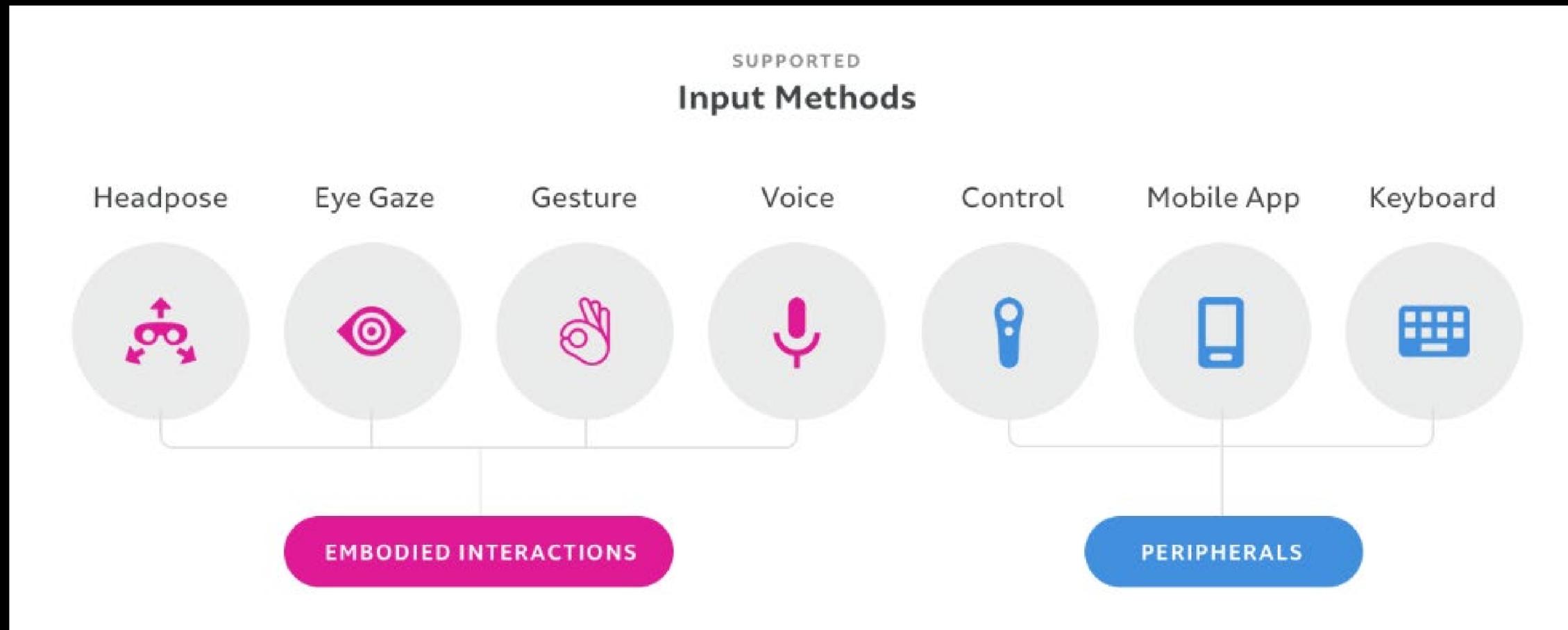
Typical path:

c:\Users\ACCOUNT_NAME\MagicLeap\mlsdk\v0.##.0

Main Camera



ML Input



Magic Leap Control



Controller.cs

```
MLInputController _controller;  
bool _homeButtonUp;  
  
void Start() { _controller = MLInput.GetController(MLInput.Hand.Left);  
               MLInput.OnControllerButtonUp += OnButtonUp;  
}  
  
void OnDestroy() { MLInput.Stop(); }  
  
void OnButtonUp(byte controller_id, MLInputControllerButton button) {  
    if (button == MLInputControllerButton.HomeTap) {  
        _homeButtonUp = true;  
    }  
}
```

AppManager

AppManager.cs

```
void Start() { _controller = GetComponentInChildren<Controller>();  
             MLInput.OnTriggerDown += HandleOnTriggerDown; }  
  
void OnDestroy() { MLInput.OnTriggerDown -= HandleOnTriggerDown; }  
  
void Update() {  
    if (_controller._homeButtonUp) {  
        _controller._homeButtonUp = false;  
  
        // Perform the intended action here  
  
        return;  
    }  
}
```