

# Touchdesigner

TouchDesigner is a visual programming environment aimed at the creation of multimedia applications. A realtime creative coding tool to make programming accessible for artists and designers also without a formal programming skills. TouchDesigner allows you to connect "everything to everything" Everything that can be digitised can become an input to a TD application and everything that can be controlled digitally can be output from TD, allowing you to connect the digital world to the real world.

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# Getting & installing Touchdesigner

Download Touchdesigner here:

<https://derivative.ca/download>

Check the system requirements & download the right version. Install it as usual.

## KEy

The NON-COMMERCIAL version is free to use, but has limitations on resolution.

Sing up (free) to get the keys for install.

Check in with the HKUBlackbox if you need to borrow an educational license to unlock certain possibilities.

Check the 'enable dongle' or 'codemeter' box during the install for this.

# Learning Touchdesigner

You can learn Touchdesigner online! The community is 'small' and helpful, to get started check out these resources:

The derivative site : <https://derivative.ca/learn>

<https://learn.derivative.ca/>

<https://learn.derivative.ca/courses/100-fundamentals/>

## Our recommendations:

These are the TDtutorial masters, they cover a super broad spectrum and help you actually understand the basics:

<p><a href="https://www.youtube.com/embed/Z_WfIdiO6HI?list=PLFrhecWXVn5862cxJgysq9PYSjLdfNiHz">https://www.youtube.com/embed/Z_WfIdiO6HI?list=PLFrhecWXVn5862cxJgysq9PYSjLdfNiHz</a></p> <p><a href="http://elektronaut.com">elektronaut.com</a> bileam tschepe (elektronaut) <a href="#">youtube</a> playlist</p> <p>Very thorough &amp; clear beginners course to get you started.</p>	<p><a href="https://www.youtube.com/embed/hDHui-lxRw0?list=PLpuCjVEMQha9_WchDzqG878Gtsjd1uj5s">https://www.youtube.com/embed/hDHui-lxRw0?list=PLpuCjVEMQha9_WchDzqG878Gtsjd1uj5s</a></p> <p><a href="https://interactiveimmersive.io/">https://interactiveimmersive.io/</a></p> <p>The Interactive &amp; Immersive Headquarters <a href="#">youtube</a> playlist</p> <p>The Interactive and Immersive HQ has a mission: Help TouchDesigner freelancers, agencies, artists and designers achieve their artistic visions.</p>	<p><a href="https://www.youtube.com/embed/qbupHTEjCeU">@acrylicode</a></p> <p>In this channel you will teach how to use Touchdesigner as a creative tool.</p>	<p><a href="https://matthewragan.com/">https://matthewragan.com/</a> Matthew Ragan <a href="#">youtube</a> playlist</p> <p>Very clear &amp; thorough tutorials, that really help you understand what you are doing.</p>
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## Stuck?

Check out help on:

The Forum: <https://forum.derivative.ca/>

Discord: <https://discord.com/invite/senqbr2>

Facebook community (quick to reply!):

[TouchDesigner Artist Community \(fb\)](#)

[TouchDesigner Help Group](#)

[TouchDesigner Help Group Netherlands](#)

or contact a Blackbox host!

### **Our favourite tutorials:**

This is a playlist, latest addition:

<https://www.youtube.com/embed/dkWwZ1CryYo?list=PL0UTrJQehb2MMDdTpnSE-qSAPajVGbiMK>

Full playlist: <https://www.youtube.com/playlist?list=PL0UTrJQehb2MMDdTpnSE-qSAPajVGbiMK>

Check out AllTD:

beginners: <https://alltd.org/category/beginner/>

intermediate: <https://alltd.org/category/intermediate/>

advanced <https://alltd.org/category/advanced/>

Some of our favourite tutorial makers:

<https://www.youtube.com/@elektronaut>

<https://www.youtube.com/@TheInteractiveImmersiveHQ>

<https://www.youtube.com/@paketa12>

<https://www.youtube.com/@OkamirufuV>

<https://www.youtube.com/@acrylicode>

[https://www.youtube.com/@rey\\_nbows](https://www.youtube.com/@rey_nbows)

<https://www.youtube.com/@raganmd>

<https://www.youtube.com/@NotoTheTalkingBall>

<https://www.youtube.com/@pppanik007>

# Mediapipe for bodytracking in TD: No kinect needed!

Realtime Body tracking on Mac & Pc with just a webcam!

Camera's like Kinect can do body & facial tracking with infra red. You can read more about this on [another one of our bookstack pages](#).

But with AI, you can now also use your webcam for tracking!

Mediapipe is Machine Learning by Google implemented through Python;

read up on the details here; <https://developers.google.com/mediapipe>

And if this kind of goes above your head but you do kind of want to understand what you are doing check this out: <https://www.assemblyai.com/blog/mediapipe-for-dummies/>

You can install Mediapipe on you computer and in Touchdesigner using this step by step tutorial: <http://www.magicandlove.com/blog/2021/06/02/mediapipe-in-touchdesigner-6/>

But, since 2023 Torin Blankensmith has developed a plugin for TD (so no separate install of mediapipe!)

Check out the [tutorial](#)

Get the latest version of the plugin on [github](#).

*Be aware that, although this way of using Mediapipe is much easier to setup, it is a lot heavier on your system/resources than when installing the necessary libraries yourself like described above.*

# Toxes

On this page we'll share some custom toxes made previously in Touchdesigner by us.  
And them to you Palette for easy acces.

Beware, these are handmade, to fully understand what is happening, it is advised to re-build them yourself ;)

	<a href="#">Bare_Conductive.tox</a> to use Bare Conductive in TD <a href="#">more info here</a>	<a href="#">RadiusCheck.tox</a> Creates a virtual point in 3D space and checks the relation between input XYZ. Set the radius in metres Set the XYZ location feed it a live location (XYZ) Outputs Percentage within the radius Outputs InsideBounds Outputs Distance in Metres	tbd	Various Toxes for controlling you LED lights trough DMX can be found here: <a href="#">bookstack: digital- lighting-control-from- computer</a>

On Github:

<https://github.com/hku-ect/TouchDesignerComponents>

Library-platform of inspiring TD Toxes shared by creators:

<https://olib.amb-service.net/>

# examples (random selection)

<https://www.youtube.com/embed/0tVn7OcRxHw>

<https://www.youtube.com/embed/oSPbZISVjRM>

<https://www.youtube.com/embed/SbYtliZdrew>

<https://www.youtube.com/embed/G7JP4RvUhCA?list=PLI5TtbxZytbmOqruxcmiMQSDXSgiANydw>

<https://www.youtube.com/embed/UyUOhb8olec?list=PLI5TtbxZytbmOqruxcmiMQSDXSgiANydw>

[https://www.youtube.com/embed/R\\_MNIJct2qo?list=PLI5TtbxZytbmOqruxcmiMQSDXSgiANydw](https://www.youtube.com/embed/R_MNIJct2qo?list=PLI5TtbxZytbmOqruxcmiMQSDXSgiANydw)