

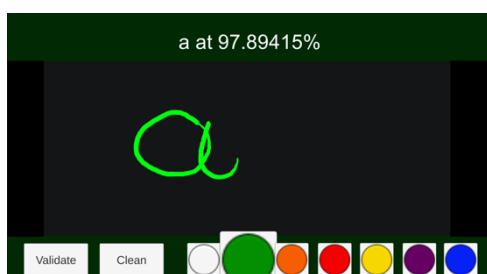
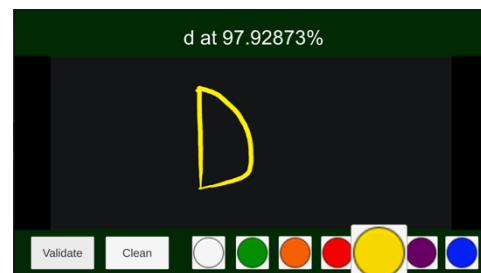
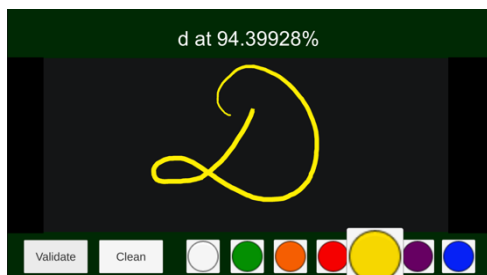
HandWriting with \$P Point---Cloud Recognizer for alphabets and numbers

What is \$P Point---Cloud Recognizer

The [\\$P Point---Cloud Recognizer](#) is a 2---D gesture recognizer designed for rapid prototyping of gesture---based user interfaces. In machine learning terms, \$P is an instance---based nearest---neighbor classifier with a Euclidean scoring function, i.e., a geometric template matcher. \$P is the latest in the dollar family of recognizers that includes [\\$1 for unistrokes](#) and [\\$N for multistrokes](#). Although about half of \$P's code is from \$1, unlike both \$1 and \$N, \$P does not represent gestures as ordered series of points (i.e., strokes), but as unordered point---clouds. By representing gestures as point---clouds, \$P can handle both unistrokes and multistrokes equivalently and without the combinatoric overhead of \$N. When comparing two point---clouds, \$P solves the classic [assignment problem](#) between two bipartite graphs using an approximation of the [Hungarian algorithm](#).

This is an adaptation of the original C# code and the adaptation of the [PDollar Unity Asset](#).

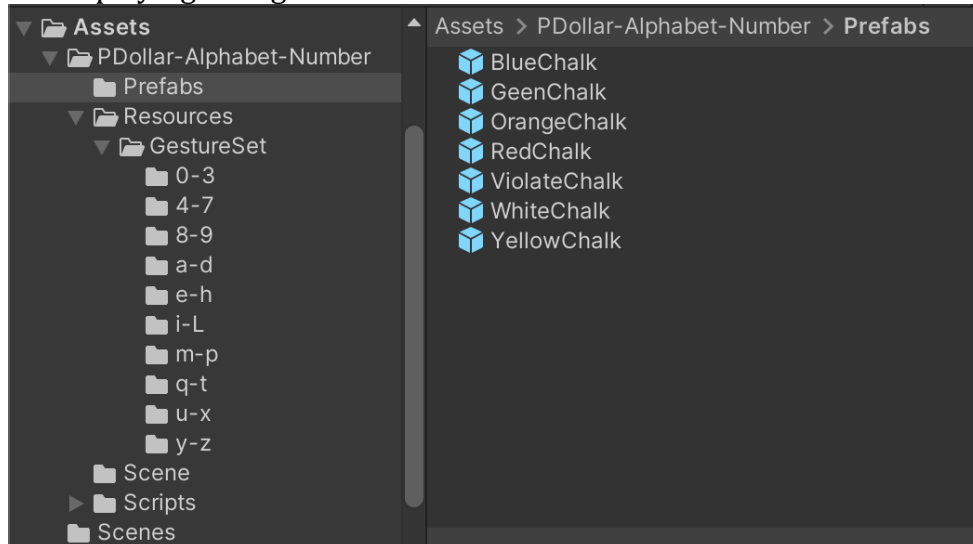
On this project you have the templates of letters A to Z and number 0 to 9. You Can add additional templates as you wish, and even define your own custom gesture Templates .



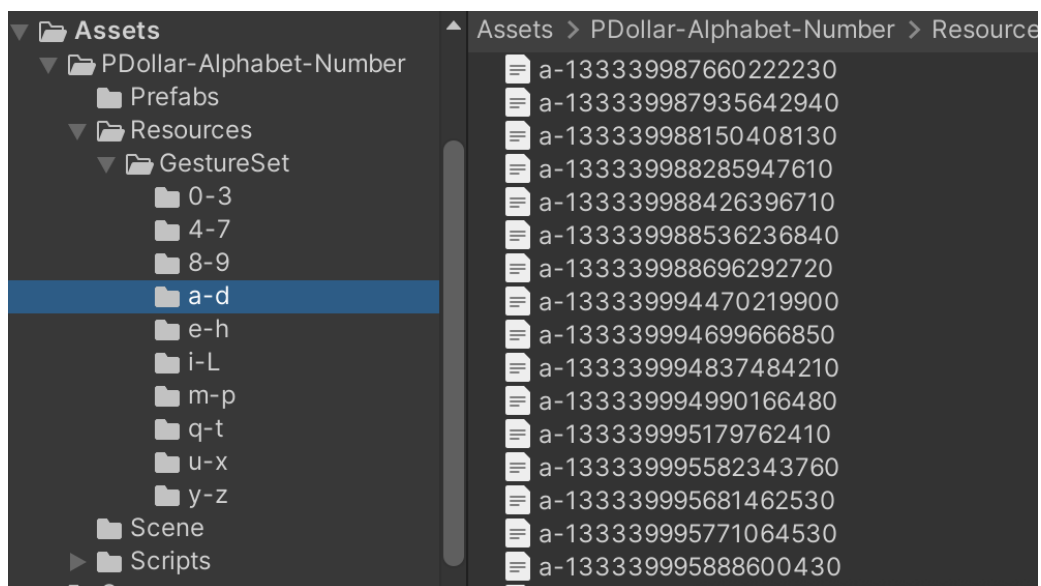
Setup :

Import the PDollar-Alphabet-Number folder into your Unity project inside the folder you will have :

- Prefabs : All the Line Render Prefabs (White, Blue, Yellow, Red, Violate, green and orange)
- for displaying user gesture.



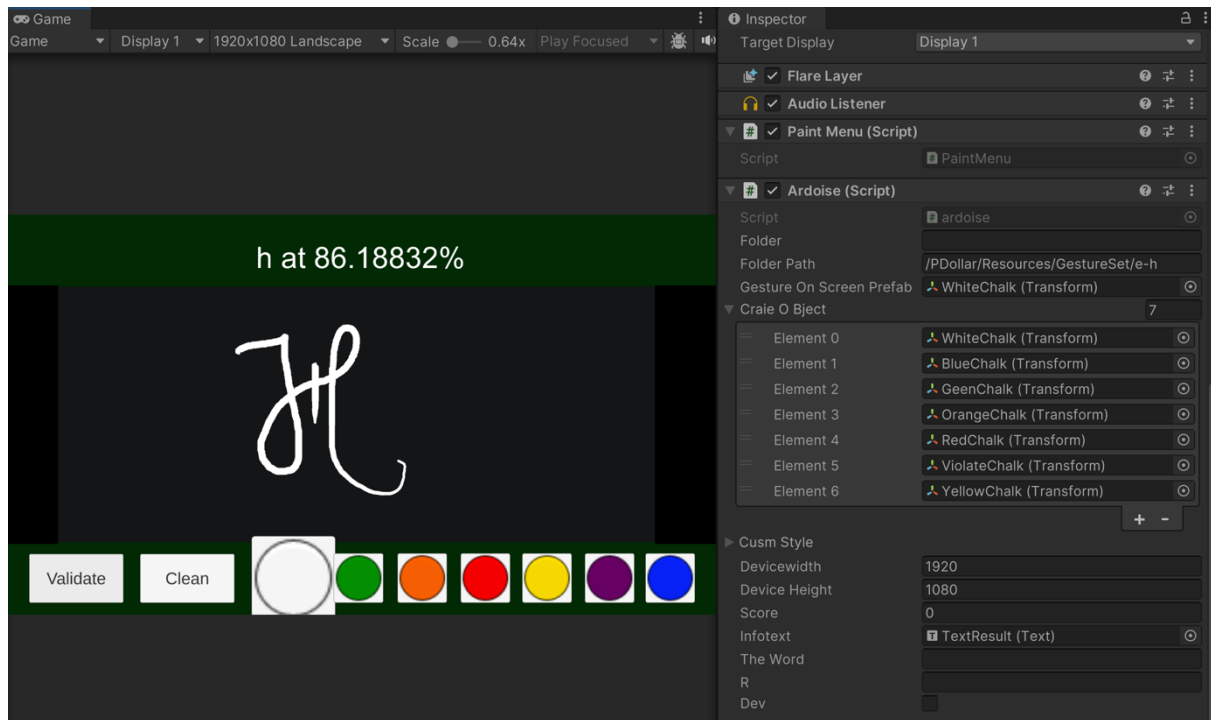
Resources : All the folders where are saved the gestures data as xml files. Each data are stored according to the name of the folder. Folder 0-3 has all data gestures to write number from 0 to 3.



Scene : A demo scene with the name Slate.

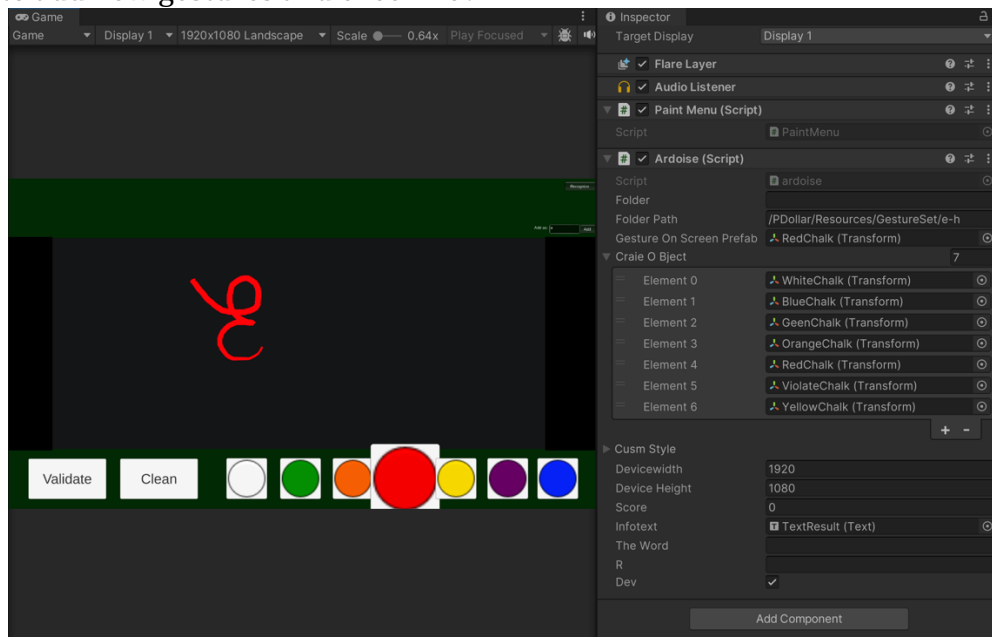
Scripts : The ardoise script for the demo, PaintButton change the size of the button when pressed, PaintMenu change the line color and the PDollar algorithm.

The ardoise *Script* is attached to the *Main Camera* and all the Line prefabs must be linked to this ardoise *Script*. If you want to write a letter or a number make sure that you enter the correct folder name on the Folder value on the script ardoise in the inspector.



Features:

Using the PDollar algorithm you can recognize features with multi---strokes and register new one. You can register new gestures running Unity demo directly or on mobile. They will be saved at [Application.persistentDataPath](#). Note you can't save the xml generated on Unity Web Player. You have to be sure to put on folder variable in the inspector the perfect folder where you want to add new gestures and check Dev.



Support & issues : <https://github.com/in-mind-tech/PDollar-Alphabet-Number>
Contact : info@in-mind.me