

\$P Point-Cloud Gesture Recognizer C# library

Radu-Daniel Vatavu
University Stefan cel Mare of Suceava
Suceava 720229, Romania
vatavu@eed.usv.ro

Lisa Anthony
UMBC Information Systems
1000 Hilltop Circle
Baltimore MD 21250
lanthony@umbc.edu

Jacob O. Wobbrock
Information School | DUB Group
University of Washington
Seattle, WA 98195-2840 USA
wobbrock@uw.edu

This short document briefly illustrates how to employ the `PDollarGestureRecognizer.dll` library implementing the \$P gesture recognizer in C# (.NET 4 Framework). The \$P recognizer can be easily invoked with one single function call: `PointCloudRecognizer.Classify(...)` which takes as arguments the candidate gesture and the training set. We provide sample code below as well as diagrams of the library classes.

```
using PDollarGestureRecognizer;
...

// define the training set
// or have it read from data files
Gesture[] trainingSet = new Gesture[]
{
    new Gesture(
        new Point[] { /* point data here or load from file */ },
        "arrow"),
    new Gesture(
        new Point[] { /* point data here or load from file */ },
        "star"),
    new Gesture(
        new Point[] { /* point data here or load from file */ },
        "asterisk"),
    /* more training samples here */
};

// acquire gesture points from user
// and construct the candidate gesture
Point[] points = new Point[] {
    /* points come from the acquisition device, e.g.,
    mouse/pen/touch */
};
Gesture candidate = new Gesture(points);

// classify the candidate gesture
string gestureClass = PointCloudRecognizer.Classify(
    candidate, trainingSet
);

// take action
switch (gestureClass)
{
    case "arrow": break;
    case "star": break;
    ...
}
```

