Project : online learning for recognition of 2D continuous motion

- A writing panel

Get a series of 2D points
Use a 2D array to store 2D time series

- Filing buttons

load a temporal pattern
save a temporal pattern

- file name. E.x.

'a1' denotes the first template of the pattern named 'a'
's1' denotes the first template of the pattern named 's'
's2' denotes the second template of the pattern named 's'

- A module of parsing networks

Each module consists of two parsing networks,respectively characterizing horizontal and vertical motions

let a be a nx2 matrix and a(i,:) denote the position of the 2D motion at time i

paired data for learning the first parsing network
x(i,:) collects a(i-L,:),...,a(i-1,:).
y(i) is a(i,1)

paired data for learning the second parsing network
x(i,:) collects a(i-L,:),...,a(i-1,:).
y(i) is a(i,2)

- Use an mat file to store two parsing network in each module

e.x.

module1.mat is an mat file that is composed of Net1 and Net2

Net1 is a data structure

Net1.NetDef

Net1.W1

Net1.W2

Net2 is a data structure

Net2.NetDef

Net2.W1

Net2.W2

- db is a data structure

db.num : the number of total modules in the database

db.modul : an array that stores muddle numbers

db.cat : categories of modules

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- gen_module

learning two parsing networks

store parameters of two parsing networks to an mat file

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- Man_DB

manipulating a database

New a database

Add a module to a database