Subject: Re: dumb q: waterfall
Posted by Phillip & Suzanne on Mon, 26 Oct 1998 08:00:00 GMT
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David Fanning wrote:

> Nancy R. Galbraith (ngalbraith@whoi.edu) writes:

>> Sorry, I can't find this in the manual. I need to make a "waterfall
>> plot" in which the y axis applies to the first bin of data in a 2d
>> time series, and the subsequent bins are offset from the first. Its
>> pretty simple in a lot of plotting pkgs, but I cat see the right
>> way to do it in idl. Any advice would be greatly appreciated.

> I guess there are many ways to do this, but here is
> a short example that I modified a bit to make it look
> like your little drawing. I hope it will be enough
> to give you the idea anyway.

> David

David has a good idea to start, but it turns out that the SURFACE routine actually makes this type of plot VERY simple. Here's David's code hacked to use it.

```
PRO Waterfall

   ; Create the data.

seed = 1L
data = FltArr(6, 101)
FOR count = 0, 5 DO BEGIN
   row = RandomU(seed, 101)
   FOR j=0,4 DO row = Smooth(row, 3)
   data[count, *] = row  * 30
ENDFOR

   ; Display window

Window, XSize=300, YSize=500

   ; Draw the plots.
surface, data, ax=70, az=0, /horizontal, /upper, zaxis=-1
END
```

Phillip

Subject: Re: dumb q: waterfall
Posted by Pete Riley on Mon, 26 Oct 1998 08:00:00 GMT
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Nancy R. Galbraith wrote in message <3634D856.1E836D42@whoi.edu>...
> Sorry, I can't find this in the manual. I need to make a "waterfall
> plot" in which the y axis applies to the first bin of data in a 2d
> time series, and the subsequent bins are offset from the first. Its
> pretty simple in a lot of plotting pkgs, but I cat see the right
> way to do it in idl. Any advice would be greatly appreciated.
>

Hi Nancy,

If I understand what you're after, the 'threed' function should do what you want. Check the IDL online help. If it's not quite what you need, you can always hack the code which everyone does and is in the lib subdirectory of the IDL distribution.

-Pete Riley

Subject: Re: dumb q: waterfall
Posted by davidf on Mon, 26 Oct 1998 08:00:00 GMT
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Nancy R. Galbraith (ngalbraith@whoi.edu) writes:

> Sorry, I can't find this in the manual. I need to make a "waterfall
> plot" in which the y axis applies to the first bin of data in a 2d
> time series, and the subsequent bins are offset from the first. Its
> pretty simple in a lot of plotting pkgs, but I cat see the right
> way to do it in idl. Any advice would be greatly appreciated.

I guess there are many ways to do this, but here is
a short example that I modified a bit to make it look
like your little drawing. I hope it will be enough
to give you the idea anyway.

Cheers,

David

```
------------------------------------------------------------
PRO Waterfall

  ; Create the data.
```

```
seed = 1L
data = FltArr(101, 6)
FOR count = 0, 5 DO BEGIN
  row = RandomU(seed, 101)
  FOR j=0,4 DO row = Smooth(row, 3)
  data[*, count] = row  * 30
ENDFOR

  ; Display window

Window, XSize=300, YSize=500

  ; Draw the plots.

Plot, data[*,0], XStyle=8, YStyle=4, XTitle='Time', $
  Position=[0.1, 0.1, 0.9, 0.2], YRange=[0,30]
Plot, data[*,1], XStyle=4, YStyle=4, YRange=[0,30], $
  Position=[0.1, 0.2, 0.9, 0.3], /NoErase
Plot, data[*,2], XStyle=4, YStyle=4, YRange=[0,30], $
  Position=[0.1, 0.3, 0.9, 0.4], /NoErase
Plot, data[*,3], XStyle=4, YStyle=4, YRange=[0,30], $
  Position=[0.1, 0.4, 0.9, 0.5], /NoErase
Plot, data[*,4], XStyle=4, YStyle=4, YRange=[0,30], $
  Position=[0.1, 0.5, 0.9, 0.6], /NoErase
Plot, data[*,5], XStyle=4, YStyle=4, YRange=[0,30], $
  Position=[0.1, 0.6, 0.9, 0.7], /NoErase
Plot, data[*,5], XStyle=4, YStyle=4, YRange=[0,30], $
  Position=[0.1, 0.7, 0.9, 0.8], /NoErase
Plot, data[*,5], XStyle=4, YStyle=8, YRange=[0,30], $
  Position=[0.1, 0.8, 0.9, 0.9], /NoErase
Axis, XAxis=1
END
```

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Coyote's Guide to IDL Programming: http://www.dfanning.com/