
Subject: Resampling from cumulative probability distribution

Posted by [Klemens](#) on Sat, 26 Jan 2008 14:09:52 GMT

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Hallo together,

I am computing a bootstrap analysis where the resampling routine from a cumulative probability distribution needs the most cpu time. May be you have some ideas how to eliminate the loop and speed up the routine ...

```
function get_bootstrap_pdf, np, cdf
```

```
zz = randomu(S, np)                ; np is the number of  
samples
```

```
cdfa = cdf[0:n_elements(cdf)-2]    ; cdf is the cumulative  
probability distribution  
cdfb = cdf[1:n_elements(cdf)-1]
```

```
b = fltarr(n_elements(cdf))        ; b will be the  
resampled distribution  
b[*] = 0.00
```

```
for i = 0, n_elements(cdf)-2 do begin                ;  
loop through all bins  
  index = where((zz ge cdfa[i]) and (zz lt cdfb[i]))  
  if (max(index) ge 0) then begin  
    b[i] = n_elements(index)  
  endif else begin  
    b[i] = 0.00  
  endelse  
endfor
```

```
total_b = total(b)  
b = b / total(b)
```

```
return, b
```

```
end
```

Thanks for your help in advance !

Klemens
