

DYALOG

Elsinore 2019



TamStat 2019 Technical Update

Michael Baas

What's new?

- ◆ DUI
- ◆ API
- ◆ FontAwesome
- ◆ Misc



DUI

- ◆ = **D**yalog **U**ser **I**nterface
- ◆ Project title only...
- ◆  Cross platform HTML5-based front ends
- ◆ DUI is...



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Goethe

*"Two souls alas!
are dwelling in my
breast!"*



DUI

- = **D**yalog **U**ser **I**nterface
- Project title only...
-  Cross platform HTML5-based front ends
- DUI is...
 - Content Generation (HTML,JS,CSS)
 - Server (serves content)
 - HRServer
 - MiServer

Goethe

*"Two souls alas!
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Transition to DUI

- ◆ When I got it on my PC, I launched it...
- ◆ ...started TamStat...
- ◆ ...and it worked!
- ◆ Almost....



Transition to DUI

- ◆ When I got it on my PC, I launched it...
- ◆ ...started TamStat...
- ◆ ...and it worked!
- ◆ Almost....
- ◆ There was only one thing that needed to change



Overriding functions?

- If you used the overrides of methods exposed by the Server-Class (onServerLoad, onServerStart, onSessionStart, onSessionEnd, onHandleMSP, onHandleRequest, onIdle, Error, Log, Cleanup), you previously defined these in your custom Server-Class

```
:Class tsServer : MiServer
▽ onServerStart
:access public override
...
▽
:EndClass
```



Overriding functions?

- 🟡 If you used the overrides of methods exposed by the Server-Class (onServerLoad, onServerStart, onSessionStart, onSessionEnd, onHandleMSP, onHandleRequest, onIdle, Error, Log, Cleanup), you previously defined these in your custom Server-Class
- 🟡 Move them into ./Code/Overrides.dyalog
- 🟢 Done



```
:Class tsServer : MiServer
▽ onServerStart
:access public override
...
▽
:EndClass

:Namespace Overrides

▽ onServerStart
...
▽

:EndNamespace
```



It just works

- `]load {path}/dui[.dyalog]`

or

- `)load {path}/dui`

and then

- `#.DUI.Start '..\TamStat-App' a HTMLRenderer`

- `#.DUI.Start '..\TamStat-App' 8080 a MiServer/Browser`



API-Changes

- Last year: Namespaces as function arguments



API-Changes

- Last year: Namespaces as function arguments
- We made progress: now we're passing a namespace that contains a variable which is an **array of namespaces!**
- "Stupid" front end. But stupid in a very smart way.



Stupidly smart front end?

- The front end for HypoWiz Wizard knows almost nothing Hypothesis testing – only specific code deal with specific display of the result (using Thumbs-up/down)
- Front end is build around the "Grid" – an array of namespaces that defines the screen-elements (returned by the API)



Smartly stupid front end..in practice

Expression 0.8 0.9 0.95 0.99 mean confInt show (Height) 

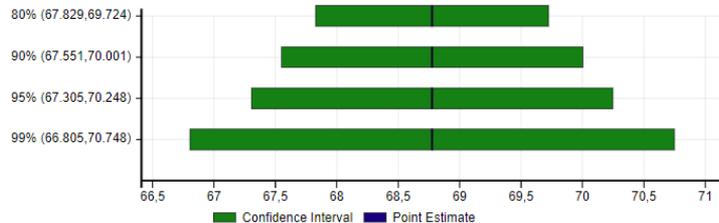
ConfLevel % % % %

Parameter

Operator Sample Size Std Dev

Sample 

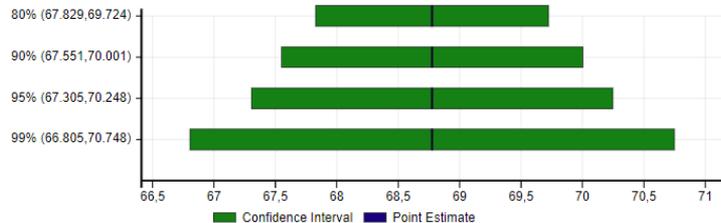
--



Smartly stupid front end...in practice

Expression 0.8 0.9 0.95 0.99 mean confInt show (Height) ▶

ConfLevel	80 %	90 %	95 %	99 %
Parameter	mean			
Operator	confInt	Sample Size	Mean	Std Dev
Sample	Height ▶	38	68.77632	4.47621
--				



Smartly stupid front end..in practice

Expression 0.8 0.9 0.95 0.99 mean confInt show (Height) 

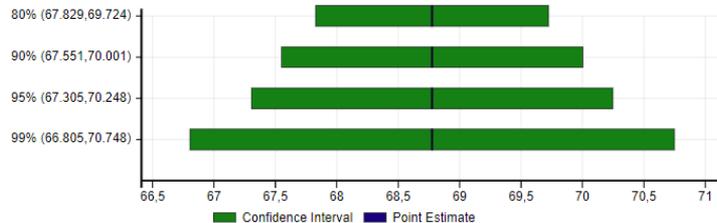
ConfLevel % % % %

Parameter

Operator Sample Size Std Dev

Sample 

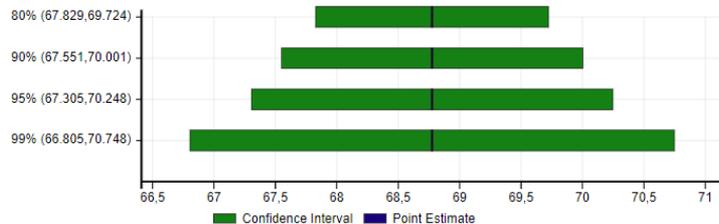
--



Smartly stupid front end..in practice

Expression 0.8 0.9 0.95 0.99 mean confInt show (Height) ▶

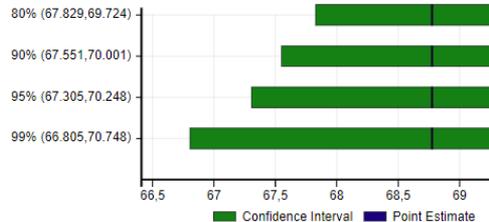
ConfLevel	80 %	90 %	95 %	99 %
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ConfLevel	80 %	90 %	95 %	99 %
Parameter	mean			
Operator	confInt	Sample Size	Mean	
Sample	Height	38		
--				



```
[display ns.Grid.(Names Values)]
```

The grid contains the following elements:

- Level1, Level2, Level3, Level4 (row 1)
- Parameter, [input], [input], [input] (row 2)
- Operator, LbSampSize, LbMean, LbSdev (row 3)
- LbSample, Sample, SampSize, Mean, Sdev (row 4)
- LbSample2, Sample2, SampSize2, Mean2, Sdev2 (row 5)

On the right side of the grid, there is a summary table:

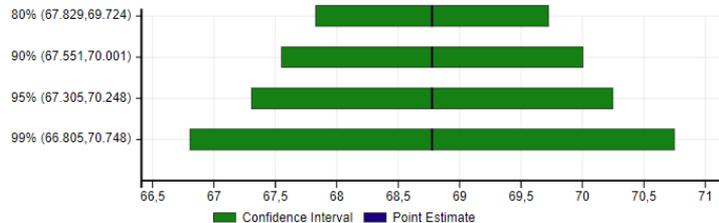
ConfLevel	0.8	0.9	0.95	0.99
Parameter	mean	[input]	[input]	[input]
Operator	confInt	Sample Size	Mean	Std Dev
Sample	stats	30	0	0
--	[input]	[input]	[input]	[input]



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Expression 0.8 0.9 0.95 0.99 mean confInt show (Height) ▶

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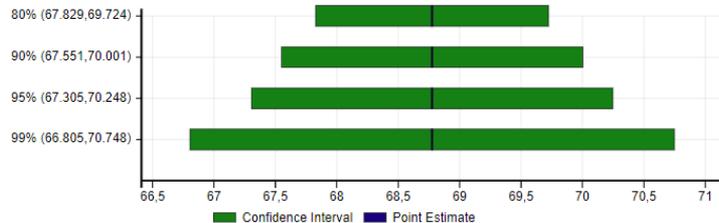
ConfLevel % % % %

Parameter

Operator Sample Size Std Dev

Sample 

--

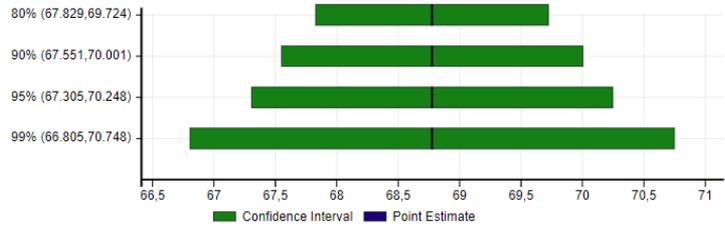


```

1 / 1
= ConfLevel
{"Type": "T"}
    
```

Expression

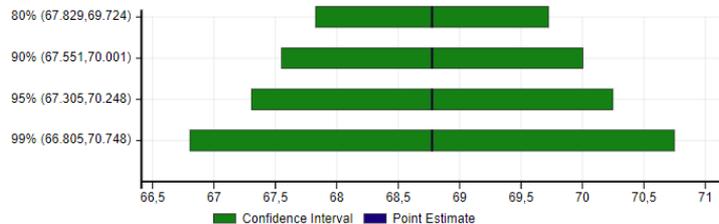
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ConfLevel	80 %	90 %	95 %	99 %
Parameter	mean			
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--				



```
2 / 2  
Parameter = mean  
→ {"Items":["mean","proportion","var","sdev"],"Type":"d"}
```



```
2 / 2  
Parameter = mean  
→ {"Items":["mean","proportion","var","sdev"],"Type":"d"}
```



```

2 / 2
Parameter = mean
{"Items":["mean","proportion","var","sdev"],"Type":"d"}
    
```

Expression: 0.9

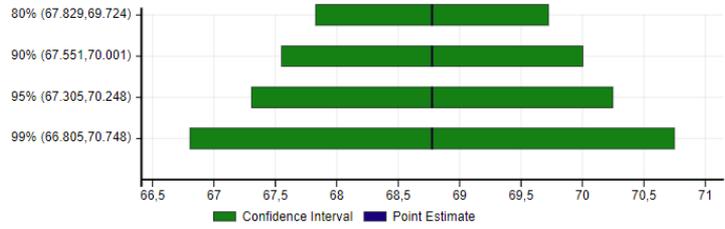
ConfLevel: 80 % 95 % 99 %

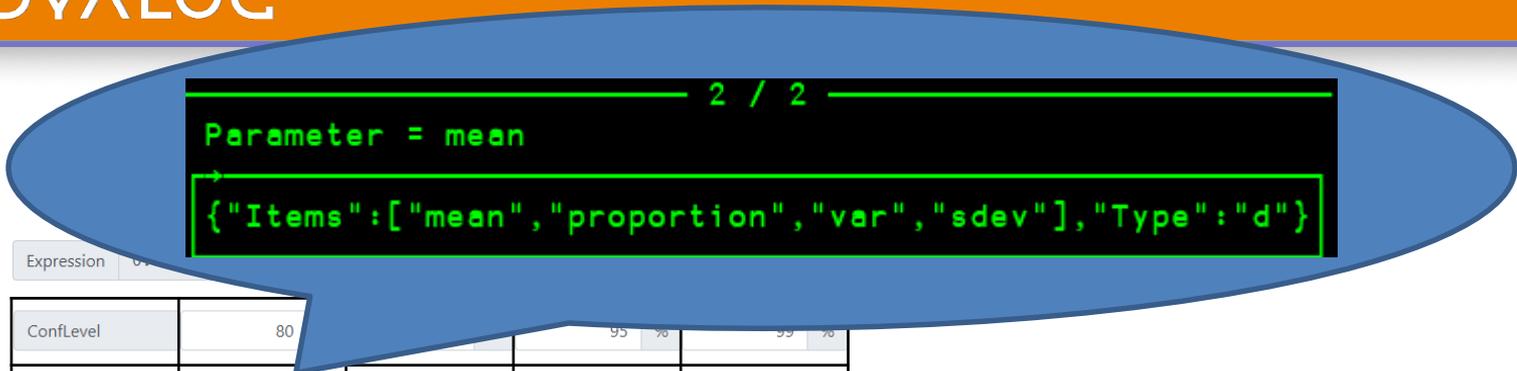
Parameter: mean

Operator: confint Sample Size: Mean Std Dev

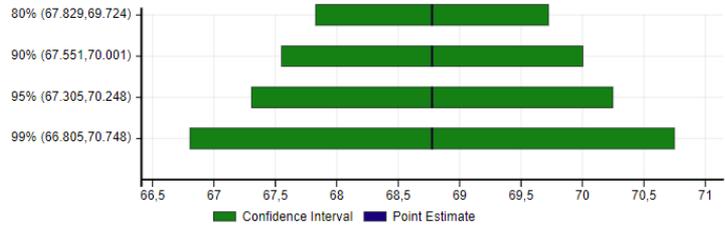
Sample: Height  38 68.77632 4.47621

--





ConfLevel	80	95 %	99 %
Parameter	mean		
Operator	conflnt	Sample Size	Mean
Sample	Height	38	68.77632
--			



```
4 / 2
```

```
Sample = Height
```

```
→  
{"Items": "F", "Type": "E"}
```



```
4 / 2
```

```
Sample = Height
```

```
→  
{"Items": "F", "Type": "E"}
```



```

4 / 2
Sample = Height
{"Items": "F", "Type": "E"}
    
```

Expression 0.8 0.8

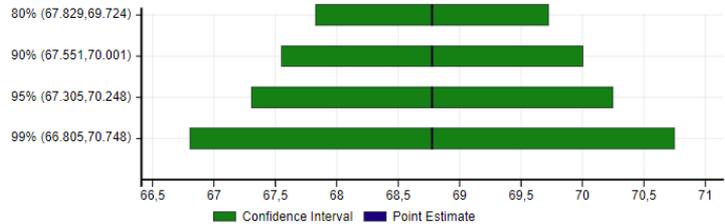
ConfLevel 80 % 95 % 99 %

Parameter mean

Operator confint Sample Size Mean Std Dev

Sample Height 38 68.77632 4.47621

--

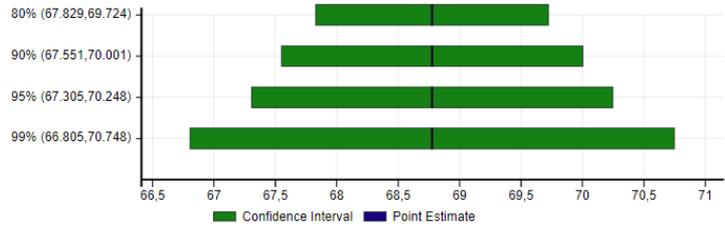


```

4 / 2
Sample = Height
{"Items": "F", "Type": "E"}
    
```

Expression 0.8 0.8

ConfLevel	80 %	95 %	99 %
Parameter	mean		
Operator	confint	Sample Size	Mean
Sample	Height 	38	68.77632
--			4.47621



```
5 / 1  
LbSample2 = --  
{ "Items": ["--", " - Sample2", "splitBy"], "Type": "d" }
```



```
5 / 1  
LbSample2 = --  
{ "Items": ["--", " - Sample2", "splitBy"], "Type": "d" }
```



```

5 / 1
LbSample2 = --
{"Items":["--"," - Sample2","splitBy"],"Type":"d"}
    
```

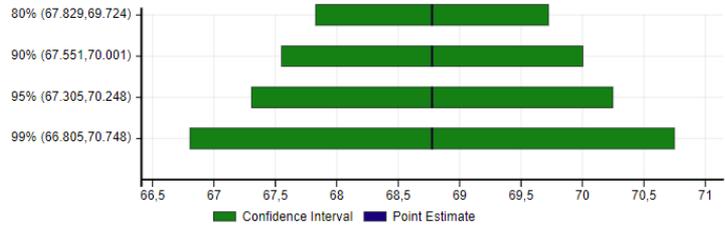
Expression 0.8 0.8

ConfLevel % %

Parameter

Operator

Sample

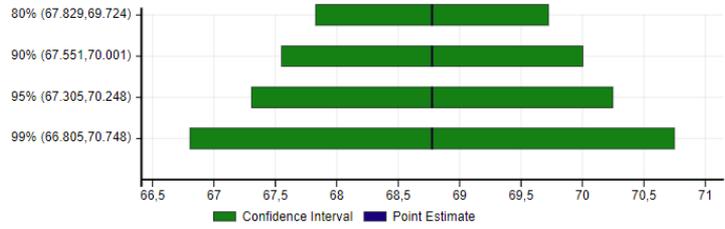


```

5 / 1
LbSample2 = --
{"Items":["--"," - Sample2","splitBy"],"Type":"d"}
    
```

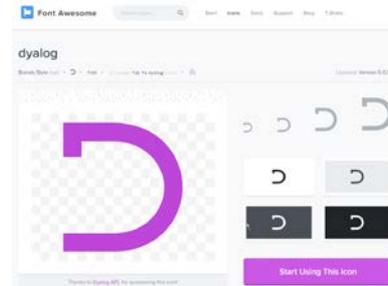
Expression 0.8 0.8

ConfLevel	80	95 %	99 %
Parameter	mea		
Operator		Sample Size	Mean
Sample	Height	38	68.77632
--			4.47621



FontAwesome

- A versatile collection of icons
- Dyalog supported the development and was rewarded with a Dyalog-D icon!



FontAwesome

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- Upgraded to use Version 5.10.2

Fontawesome.com
> 7.000 Icons



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- TamStat now uses Duotone-Icons



FontAwesome

- A versatile collection of icons
- Dyalog supported the development and was rewarded with a Dyalog-D icon!
- Upgraded to use Version 5.10.2
- TamStat now uses Duotone-Icons
- MiServer / DUI-Users are entitled to use it!
 - *Available on my.dyalog.com (soon)*
 - *\$99 Licence might be required if you want to deploy it with an app – check their terms.*



Misc[1]: TamStat & GitHub



Misc[2]: download from a private repo!

Write a script to download a release from a private GitHub-Repository!

- curl (Windows)



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Write a script to download a release from a private GitHub-Repository!

- curl (Windows)
- HttpCommand

```
]load HttpCommand
hc←NEW HttpCommand
hc.Headers←('Authorization' 'token ***')
           ('Accept' 'application/vnd.github.v3.raw')
hc.URL←'https://api.github.com/repos/Dyalog/',repo,'/releases'
res←hc.Run
:If res.rc=0
  js←JSON res.Data
  js←js[_15<#''js.zipball_url] A filter & sort by published_at
  hc.URL←js[1].zipball_url
  res2←hc.Run
  ...res2.Data ⌵NAPPEND tie...
```

