Age distributions

Version 1.2.1, by Giorgio Bianchini

Description: Plots node age distributions.

Module type: Plotting

Module ID: `5dbe1f3c-dbea-49b3-8f04-f319aefca534`

This module can be used to draw age distributions on the tree. The age distributions must have been previously set up using the *Set up age distributions* module (id `a1ccf05a-cf3c-4ca4-83be-af56f501c2a6`). This module can only be used if the tree is being drawn using *Rectangular* or *Circular* coordinates.

Parameters

Age distribution

Control type: Drop-down list

Default value: Default

Possible values:

- Default
- Custom

This parameter determines whether the age distribution that is shown is the default one (i.e., the last one that has been set up), or whether a name should be entered to specify another age distribution.

Distribution name

Control type: Text box

If the value for the Age distribution parameter is `Custom`, this text box can be used to enter the name of the age distribution to draw (as defined within the parameters of the *Set up age distributions* module).

Plot type

Control type: Drop-down list

Default value: Envelope

Possible values:

- Histogram
- Envelope

This parameter determines the kind of plot used to draw the age distributions. If the value is `Histogram`, a histogram is drawn at each node, displaying the age distributions. The bars of the histogram are centered so that the plot looks similar to a violin plot. The width of the bars of the histogram is chosen automatically.

If the value is `Envelope`, a violin plot is drawn, using the same samples that would be used to draw the histogram; instead of drawing rectangular bars, a smooth spline is interpolated between the sample points to produce a smooth-looking plot. Please note that this is not a kernel density estimation of the age distribution (as that would be too expensive to draw in real time).

Show on

Control type: Drop-down list

Default value: Internal nodes

Possible values:

- Leaves
- Internal nodes
- All nodes

This parameter determines on which nodes the age distributions are shown. If the value is `Leaves`, the age distributions are only shown for terminal nodes (nodes with no child nodes). If the value is `Internal nodes` they are shown only for internal nodes (nodes which have at least one child). If the value is `All nodes`, age distributions are shown for both leaves and internal nodes.

Height

Control type: Number spin box

Default value: 10

Range: [0, $+\infty$)

This parameter determines the height of the age distribution plot for each node.

Auto colour by node

Control type: Check box

Default value: Checked

If this check box is checked, the colour of each age distribution is determined algorithmically in a pseudo-random way designed to achieve an aesthetically pleasing distribution of colours, while being reproducible if the same tree is rendered multiple times.

Opacity

Control type: Slider

Default value: 50 %

Range: [0 %, 100 %]

This parameter determines the opacity of the colour used if the Auto colour by node option is enabled.

Colour

Control type: Colour (by node)

Default value: ■ #000000 (opacity: 100%)

Default attribute: `Color`

This parameter determines the colour used to draw each age distribution (if the Auto colour by node option is disabled). The colour can be determined based on the value of an attribute of the nodes in the tree. For nodes that do not possess the specified attribute (or that have the attribute with an invalid value), a default value is used. The default attribute used to determine the colour is `Color`.

Auto stroke colour by node

Control type: Check box

Default value: Checked

If this check box is checked, the colour of each age distribution is determined algorithmically in a pseudo-random way designed to achieve an aesthetically pleasing distribution of colours, while being reproducible if the same tree is rendered multiple times.

Line opacity

Control type: Slider

Default value: 50 %

Range: [0 %, 100 %]

This parameter determines the opacity of the colour used if the Auto stroke colour by node option is enabled.

Line colour

Control type: Colour (by node)

Default value: ■ #000000 (opacity: 100%)

Default attribute: `Color`

This parameter determines the colour used to stroke each age distribution (if the Auto stroke colour by node option is disabled). The colour can be determined based on the value of an attribute of the nodes in the tree. For nodes that do not possess the specified attribute (or that have the attribute with an invalid value), a default value is used. The default attribute used to determine the colour is `Color`.

Line weight

Control type: Number spin box (by node)

Default value: 0

Range: [0, +∞)

Default attribute: `Thickness`

The thickness of the outline for the branch distributions. This can be determined based on the value of an attribute of the nodes in the tree. For nodes that do not possess the specified attribute (or that have the attribute with an invalid value), a default value is used. The default attribute used to determine the thickness of the branches is `Thickness`.

Line cap

Control type: Drop-down list

Default value: Round

Possible values:

- Butt

- Round
- Square

The line cap to use when drawing the distributions.

Line dash

Control type: Line dash

Default value: ——————

- *Units on*: 0
- *Units off*: 0
- *Phase*: 0

The line dash to use when drawing the distributions.