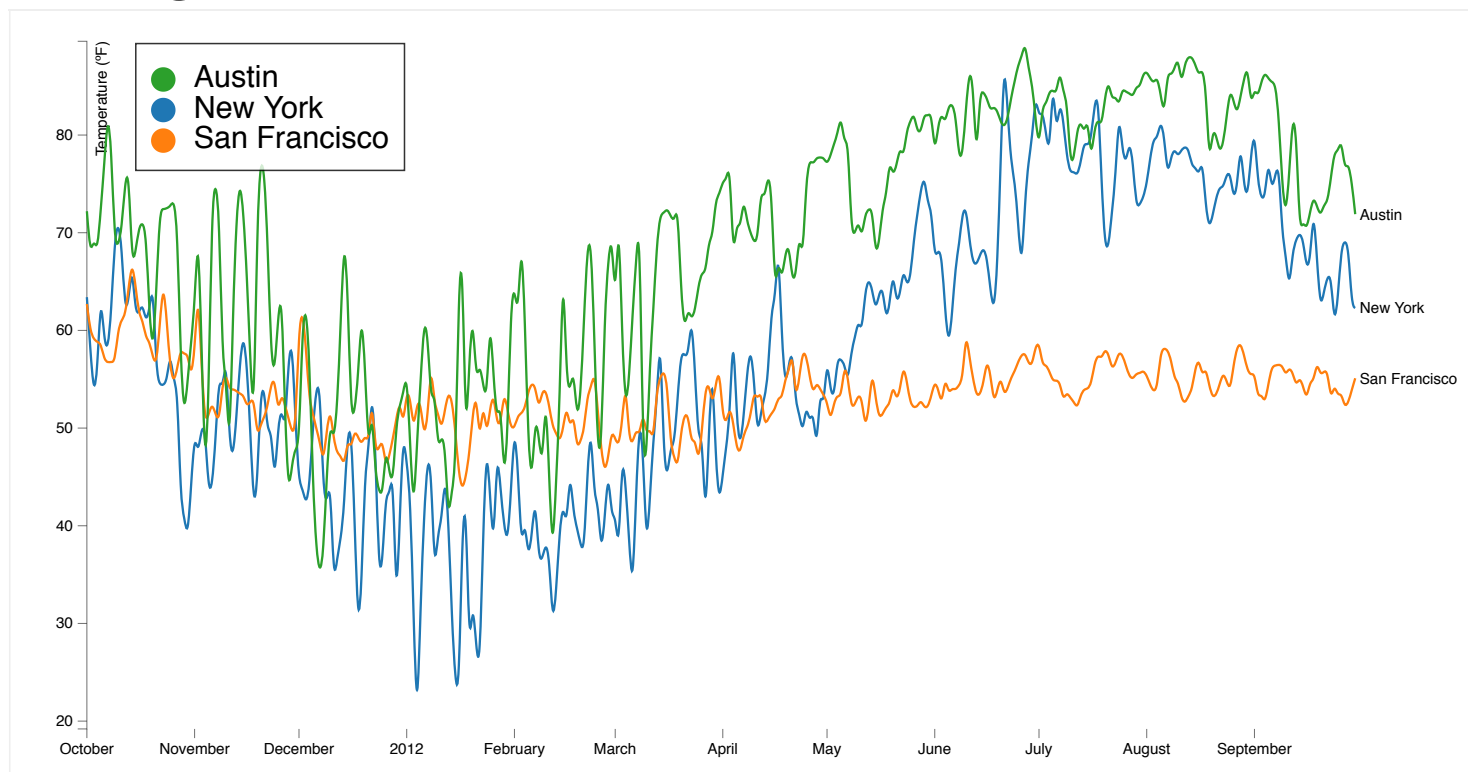


d3.legend example

[Open](#)

d3.legend

d3.legend is a quick hack to add a legend to a d3 chart. Simply add a g and `.call(d3.legend)`.

Any elements that have a title set in the "data-legend" attribute will be included when `d3.legend` is called. Each title will appear only once (even when multiple items define the same data-legend) as the process uses a set based on a existing names, not an array of all items.

Color

By default the color in the legend will try to match the fill attribute or the stroke attribute of the relevant items. Color can be explicitly defined by attribute "data-legend-color"

Order

The order of items in the legend will be sorted using the top of the bounding box for each included item. The order can be explicitly defined by attribute "data-legend-pos"

Padding

Padding will be determined by attribute "data-style-padding" on the legend element. Defaults to 5.

Size

Size of the box is determined by font size, as items are placed using "em" and the frame around the items is based on the bounding box.

This Example

This example takes an existing Gist and adds a legend by defining data-legend for each series and calling `d3.legend` on a "g" element. To show the font-adjustment I change font-size after one second and call `d3.legend` again.

d3.legend

`d3.legend` is a quick hack to add a legend to a `d3.graph`. Simply add a g and `.call(d3.legend)`. Any elements that has a title set in the "data-legend" attribute set will be included, when `d3.legend` is called. Each title will appear only once as the process uses a set based on a existing names, not an array of all items.

Color

By default the color in the legend will try to match the fill attribute or the stroke attribute of the relevant items. Color can be explicitly defined by attribute "data-legend-color"

Order

The order of items in the legend will be sorted using the top of the bounding box for each included item. The order can be explicitly defined by attribute "data-legend-pos"

Padding

Padding will be determined by attribute "data-style-padding" on the legend element. Defaults to 5.

Size

Size of the box is determined by font size, as items are placed using "em" and the frame around the items is based on the bounding box.

This Example

This example takes an existing Gist and adds a legend by defining data-legend for each series:

```
.attr("data-legend",function(d) { return d.name})
```

Adding the legend is as simple as:

```
legend = svg.append("g")
  .attr("class","legend")
  .attr("transform","translate(50,30)")
  .style("font-size","12px")
  .call(d3.legend)
```

To show the font-adjustment I change font-size after one second and call `d3.legend` again.

##Comments on the original gist

This line chart is constructed from a TSV file storing the daily average temperatures of New York, San Francisco and Austin over the last year. The chart employs `conventional margins` and a number of D3 features:

- `d3.tsv` - load and parse data

- `d3.time.format` - parse dates
- `d3.time.scale` - x-position encoding
- `d3.scale.linear` - y-position encoding
- `d3.scale.category10`, a `d3.scale.ordinal` - color encoding
- `d3.extent`, `d3.min` and `d3.max` - compute domains
- `d3.keys` - compute column names
- `d3.svg.axis` - display axes
- `d3.svg.line` - display line shape

index.html

```
<!DOCTYPE html>
<meta charset="utf-8">
<style>

body {
  font: 10px sans-serif;
}

.axis path,
.axis line {
  fill: none;
  stroke: #000;
  shape-rendering: crispEdges;
}

.x.axis path {
  display: none;
}

.line {
  fill: none;
  stroke: steelblue;
  stroke-width: 1.5px;
}

.legend rect {
  fill:white;
  stroke:black;
  opacity:0.8;}

</style>
<body>
<script src="https://d3js.org/d3.v3.js"></script>
<script src="d3.legend.js"></script>
<script>

var margin = {top: 20, right: 80, bottom: 30, left: 50},
    width = 960 - margin.left - margin.right,
    height = 500 - margin.top - margin.bottom;

var parseDate = d3.time.format("%Y%m%d").parse;

var x = d3.time.scale()
    .range([0, width]);

var y = d3.scale.linear()
    .range([height, 0]);

var color = d3.scale.category10();
```

```
var xAxis = d3.svg.axis()
  .scale(x)
  .orient("bottom");

var yAxis = d3.svg.axis()
  .scale(y)
  .orient("left");

var line = d3.svg.line()
  .interpolate("basis")
  .x(function(d) { return x(d.date); })
  .y(function(d) { return y(d.temperature); });

var svg = d3.select("body").append("svg")
  .attr("width", width + margin.left + margin.right)
  .attr("height", height + margin.top + margin.bottom)
  .append("g")
  .attr("transform", "translate(" + margin.left + "," + margin.top + ")");

d3.tsv("data.tsv", function(error, data) {
  color.domain(d3.keys(data[0]).filter(function(key) { return key !== "date"; }));

  data.forEach(function(d) {
    d.date = parseDate(d.date);
  });

  var cities = color.domain().map(function(name) {
    return {
      name: name,
      values: data.map(function(d) {
        return {date: d.date, temperature: +d[name]};
      })
    };
  });

  x.domain(d3.extent(data, function(d) { return d.date; }));

  y.domain([
    d3.min(cities, function(c) { return d3.min(c.values, function(v) { return v.temperature; }); }),
    d3.max(cities, function(c) { return d3.max(c.values, function(v) { return v.temperature; }); })
  ]);

  svg.append("g")
    .attr("class", "x axis")
    .attr("transform", "translate(0," + height + ")")
    .call(xAxis);

  svg.append("g")
    .attr("class", "y axis")
    .call(yAxis)
    .append("text")
    .attr("transform", "rotate(-90)")
    .attr("y", 6)
    .attr("dy", ".71em")
    .style("text-anchor", "end")
    .text("Temperature (°F)");

  var city = svg.selectAll(".city")
    .data(cities)
    .enter().append("g")
    .attr("class", "city");

  city.append("path")
    .attr("class", "line")
    .attr("d", function(d) { return line(d.values); })
    .attr("data-legend", function(d) { return d.name; })
    .style("stroke", function(d) { return color(d.name); });
```

```

city.append("text")
  .datum(function(d) { return {name: d.name, value: d.values[d.values.length - 1]}; })
  .attr("transform", function(d) { return "translate(" + x(d.value.date) + "," + y(d.value.temp
  .attr("x", 3)
  .attr("dy", ".35em")
  .text(function(d) { return d.name; });

legend = svg.append("g")
  .attr("class", "legend")
  .attr("transform", "translate(50,30)")
  .style("font-size", "12px")
  .call(d3.legend)

setTimeout(function() {
  legend
    .style("font-size", "20px")
    .attr("data-style-padding", 10)
    .call(d3.legend)
}, 1000)

});
</script>

```

data.tsv

date	New York	San Francisco	Austin
20111001	63.4	62.7	72.2
20111002	58.0	59.9	67.7
20111003	53.3	59.1	69.4
20111004	55.7	58.8	68.0
20111005	64.2	58.7	72.4
20111006	58.8	57.0	77.0
20111007	57.9	56.7	82.3
20111008	61.8	56.8	78.9
20111009	69.3	56.7	68.8
20111010	71.2	60.1	68.7
20111011	68.7	61.1	70.3
20111012	61.8	61.5	75.3
20111013	63.0	64.3	76.6
20111014	66.9	67.1	66.6
20111015	61.7	64.6	68.0
20111016	61.8	61.6	70.6
20111017	62.8	61.1	71.1
20111018	60.8	59.2	70.0
20111019	62.1	58.9	61.6
20111020	65.1	57.2	57.4
20111021	55.6	56.4	64.3
20111022	54.4	60.7	72.4
20111023	54.4	65.1	72.4
20111024	54.8	60.9	72.5
20111025	57.9	56.1	72.7
20111026	54.6	54.6	73.4
20111027	54.4	56.1	70.7
20111028	42.5	58.1	56.8
20111029	40.9	57.5	51.0
20111030	38.6	57.7	54.9
20111031	44.2	55.1	58.8
20111101	49.6	57.9	62.6
20111102	47.2	64.6	71.0
20111103	50.1	56.2	58.4
20111104	50.1	50.5	45.1

20111105	43.5	51.3	52.2
20111106	43.8	52.6	73.0
20111107	48.9	51.4	75.4
20111108	55.5	50.6	72.1
20111109	53.7	54.6	56.6
20111110	57.7	55.6	55.4
20111111	48.5	53.9	46.7
20111112	46.8	54.0	62.0
20111113	51.1	53.8	71.6
20111114	56.8	53.5	75.5
20111115	59.7	53.4	72.1
20111116	56.5	52.2	65.7
20111117	49.6	52.7	56.8
20111118	41.5	53.1	49.9
20111119	44.3	49.0	71.7
20111120	54.0	50.4	77.7
20111121	54.1	51.1	76.4
20111122	49.4	52.3	68.8
20111123	50.0	54.6	57.0
20111124	44.0	55.1	55.5
20111125	50.3	51.5	61.6
20111126	52.1	53.6	64.1
20111127	49.6	52.3	51.1
20111128	57.2	51.0	43.0
20111129	59.1	49.5	46.4
20111130	50.6	49.8	48.0
20111201	44.3	60.4	48.1
20111202	43.9	62.2	60.6
20111203	42.1	58.3	62.6
20111204	43.9	52.7	57.1
20111205	50.2	51.5	44.2
20111206	54.2	49.9	37.4
20111207	54.6	48.6	35.0
20111208	43.4	46.4	37.0
20111209	42.2	49.8	45.4
20111210	45.0	52.1	50.7
20111211	33.8	48.8	48.6
20111212	36.8	47.4	52.2
20111213	38.6	47.2	60.8
20111214	41.9	46.1	70.0
20111215	49.6	48.8	64.2
20111216	50.2	47.9	50.9
20111217	40.6	49.8	51.6
20111218	29.1	49.1	55.2
20111219	33.7	48.3	62.1
20111220	45.8	49.3	56.3
20111221	47.4	48.4	47.2
20111222	54.4	53.3	52.3
20111223	47.8	47.5	45.2
20111224	34.9	47.9	43.6
20111225	35.9	48.9	42.9
20111226	43.6	45.9	48.2
20111227	42.9	47.2	45.4
20111228	46.2	48.9	44.2
20111229	30.8	50.9	50.4
20111230	40.8	52.9	52.4
20111231	49.8	50.1	53.5
20120101	46.3	53.9	55.9
20120102	43.2	53.1	48.2
20120103	30.3	49.7	41.0
20120104	19.2	52.7	48.9
20120105	32.1	52.6	54.8
20120106	41.2	49.0	61.2
20120107	47.0	51.0	59.7
20120108	46.0	56.8	52.5
20120109	34.7	52.3	54.0
20120110	39.4	51.6	47.7

20120111	40.4	49.8	49.2
20120112	45.4	51.9	48.4
20120113	40.7	53.7	40.2
20120114	30.4	52.9	43.9
20120115	23.9	49.7	45.2
20120116	22.6	45.3	65.0
20120117	39.8	43.6	68.2
20120118	43.2	45.0	47.5
20120119	26.3	47.3	57.1
20120120	32.8	51.4	61.9
20120121	27.4	53.7	54.6
20120122	25.0	48.3	56.7
20120123	39.4	52.9	54.4
20120124	48.7	49.1	52.7
20120125	43.0	52.1	61.8
20120126	37.1	53.6	55.0
20120127	48.2	50.4	50.7
20120128	43.7	50.3	52.9
20120129	40.1	53.8	44.4
20120130	38.0	51.9	49.1
20120131	43.5	50.0	62.8
20120201	50.4	50.0	64.6
20120202	45.8	51.3	61.1
20120203	37.5	51.5	70.0
20120204	40.8	52.0	61.3
20120205	36.5	53.8	48.2
20120206	39.1	54.6	44.2
20120207	43.2	54.3	51.3
20120208	36.5	51.9	49.2
20120209	36.5	53.8	45.7
20120210	38.3	53.9	54.1
20120211	36.9	52.3	44.9
20120212	29.7	50.1	36.5
20120213	33.1	49.5	44.8
20120214	39.6	48.6	52.3
20120215	42.3	49.9	68.0
20120216	39.7	52.4	54.6
20120217	46.0	49.9	53.8
20120218	41.2	51.6	56.2
20120219	39.8	47.8	50.8
20120220	38.1	48.7	53.0
20120221	37.1	49.7	61.0
20120222	45.5	53.4	68.8
20120223	50.6	54.1	69.4
20120224	42.7	55.9	59.3
20120225	42.6	51.7	47.2
20120226	36.9	47.7	47.7
20120227	40.9	45.4	61.9
20120228	45.9	47.0	67.2
20120229	40.7	49.8	70.1
20120301	41.3	48.9	62.1
20120302	36.8	48.1	72.7
20120303	47.6	50.7	59.0
20120304	44.2	55.0	51.8
20120305	38.5	48.8	55.0
20120306	32.9	48.4	61.8
20120307	43.3	49.9	67.1
20120308	51.2	49.2	72.0
20120309	47.8	51.7	46.4
20120310	37.2	49.3	46.7
20120311	42.9	50.0	56.9
20120312	48.8	48.6	61.9
20120313	52.6	53.9	68.8
20120314	60.5	55.2	71.9
20120315	47.2	55.9	72.0
20120316	44.7	54.6	72.5
20120317	48.2	48.2	71.7

20120318	48.2	47.1	71.1
20120319	53.1	45.8	73.0
20120320	57.8	49.7	63.8
20120321	57.5	51.4	60.0
20120322	57.3	51.4	62.3
20120323	61.7	48.4	61.1
20120324	55.8	49.0	62.0
20120325	48.4	46.4	64.6
20120326	49.8	49.7	66.0
20120327	39.6	54.1	65.8
20120328	49.7	54.6	69.2
20120329	56.8	52.3	69.5
20120330	46.5	54.5	73.5
20120331	42.2	56.2	73.9
20120401	45.3	51.1	75.3
20120402	48.1	50.5	75.4
20120403	51.2	52.2	77.3
20120404	61.0	50.6	67.0
20120405	50.7	47.9	71.1
20120406	48.0	47.4	70.4
20120407	51.1	49.4	73.6
20120408	55.7	50.0	71.1
20120409	58.3	51.3	70.0
20120410	55.0	53.8	69.0
20120411	49.0	52.9	69.2
20120412	51.7	53.9	74.5
20120413	53.1	50.2	73.4
20120414	55.2	50.9	76.0
20120415	62.3	51.5	74.5
20120416	62.9	51.9	63.6
20120417	69.3	53.2	67.3
20120418	59.0	53.0	65.1
20120419	54.1	55.1	67.9
20120420	56.5	55.8	68.9
20120421	58.2	58.0	65.1
20120422	52.4	52.8	65.4
20120423	51.6	55.1	70.1
20120424	49.3	57.9	67.0
20120425	52.5	57.5	75.4
20120426	50.5	55.3	77.5
20120427	51.9	53.5	77.0
20120428	47.4	54.7	77.7
20120429	54.1	54.0	77.7
20120430	51.9	53.4	77.7
20120501	57.4	52.7	77.0
20120502	53.7	50.7	77.9
20120503	53.1	52.6	79.1
20120504	57.2	53.4	80.1
20120505	57.0	53.1	82.1
20120506	56.6	56.5	79.0
20120507	54.6	55.3	79.8
20120508	57.9	52.0	70.0
20120509	59.2	52.4	69.8
20120510	61.1	53.4	71.3
20120511	59.7	53.1	69.4
20120512	64.1	49.9	72.0
20120513	65.3	52.0	72.4
20120514	64.2	56.0	72.5
20120515	62.0	53.0	67.6
20120516	63.8	51.0	69.0
20120517	64.5	51.4	72.7
20120518	61.0	52.2	73.7
20120519	62.6	52.4	77.5
20120520	66.2	54.5	75.8
20120521	62.7	52.8	76.9
20120522	63.7	53.9	78.8
20120523	66.4	56.5	77.7

20120524	64.5	54.7	80.6
20120525	65.4	52.5	81.4
20120526	69.4	52.1	82.3
20120527	71.9	52.2	80.3
20120528	74.4	52.9	80.3
20120529	75.9	52.1	82.2
20120530	72.9	52.1	81.9
20120531	72.5	53.3	82.4
20120601	67.2	54.8	77.9
20120602	68.3	54.0	81.1
20120603	67.7	52.3	82.2
20120604	61.9	55.3	81.2
20120605	58.3	53.5	83.0
20120606	61.7	54.1	83.2
20120607	66.7	53.9	82.1
20120608	68.7	54.4	77.5
20120609	72.2	55.0	77.9
20120610	72.6	60.0	82.9
20120611	69.2	57.2	86.8
20120612	66.9	55.1	85.3
20120613	66.7	53.3	76.9
20120614	67.7	53.4	84.5
20120615	68.5	54.6	84.4
20120616	67.5	57.0	83.8
20120617	64.2	55.6	82.5
20120618	61.7	52.5	82.9
20120619	66.4	53.9	82.5
20120620	77.9	55.3	81.3
20120621	88.3	53.3	80.8
20120622	82.2	54.1	81.7
20120623	77.0	55.2	83.9
20120624	75.4	55.8	85.5
20120625	70.9	56.8	87.2
20120626	65.9	57.5	88.0
20120627	73.5	57.7	89.6
20120628	77.4	56.6	86.7
20120629	79.6	56.4	85.3
20120630	84.2	58.4	81.7
20120701	81.8	58.8	78.5
20120702	82.5	56.4	83.1
20120703	80.2	56.5	83.1
20120704	77.8	55.8	84.5
20120705	86.1	54.8	84.6
20120706	79.9	54.9	84.2
20120707	83.5	54.7	86.7
20120708	81.5	52.8	84.3
20120709	77.8	53.7	83.7
20120710	76.1	53.1	77.1
20120711	76.3	52.7	77.4
20120712	75.8	52.0	80.6
20120713	77.2	53.4	81.4
20120714	79.3	54.0	80.2
20120715	78.9	54.0	81.8
20120716	79.6	54.5	77.3
20120717	83.3	56.7	80.8
20120718	84.3	57.5	81.6
20120719	75.1	57.1	80.9
20120720	68.4	58.1	83.9
20120721	68.4	57.6	85.6
20120722	72.2	56.0	83.6
20120723	75.6	56.6	84.0
20120724	82.6	57.8	83.0
20120725	78.4	57.5	84.8
20120726	77.0	56.4	84.4
20120727	79.4	55.3	84.3
20120728	77.4	55.0	83.9
20120729	72.5	55.6	85.0

20120730	72.9	55.6	84.9
20120731	73.6	55.9	86.3
20120801	75.0	55.4	86.5
20120802	77.7	54.4	85.8
20120803	79.7	53.7	85.3
20120804	79.6	54.1	86.0
20120805	81.5	57.8	84.2
20120806	80.0	58.2	81.9
20120807	75.7	58.0	86.5
20120808	77.8	57.0	86.1
20120809	78.6	55.0	86.8
20120810	77.8	54.8	88.0
20120811	78.5	53.0	85.1
20120812	78.8	52.5	87.4
20120813	78.6	53.3	88.0
20120814	76.8	53.9	88.0
20120815	76.7	56.2	87.2
20120816	75.9	57.1	86.1
20120817	77.6	55.3	86.8
20120818	72.6	56.2	84.9
20120819	70.4	54.3	76.8
20120820	71.8	53.1	80.6
20120821	73.6	53.4	80.0
20120822	74.7	54.5	78.2
20120823	74.6	55.7	79.1
20120824	76.0	54.8	81.9
20120825	76.2	53.8	84.7
20120826	73.4	56.5	83.5
20120827	74.6	58.3	82.1
20120828	79.4	58.7	84.0
20120829	74.7	57.5	85.7
20120830	73.5	55.9	87.2
20120831	77.9	55.4	82.9
20120901	80.7	55.7	84.8
20120902	75.1	53.1	83.9
20120903	73.5	53.5	85.5
20120904	73.5	52.5	86.4
20120905	77.7	54.5	85.8
20120906	74.2	56.3	85.4
20120907	76.0	56.4	85.3
20120908	77.1	56.5	81.9
20120909	69.7	56.4	74.8
20120910	67.8	55.4	71.6
20120911	64.0	56.2	75.9
20120912	68.1	55.7	82.1
20120913	69.3	54.3	80.5
20120914	70.0	55.2	70.0
20120915	69.3	54.3	71.2
20120916	66.3	52.9	70.3
20120917	67.0	54.8	72.1
20120918	72.8	54.8	73.7
20120919	67.2	56.8	72.7
20120920	62.1	55.4	71.7
20120921	64.0	55.8	72.9
20120922	65.5	55.9	73.1
20120923	65.7	52.8	75.6
20120924	60.4	54.5	78.3
20120925	63.2	53.3	78.3
20120926	68.5	53.6	79.6
20120927	69.2	52.1	76.4
20120928	68.7	52.6	77.2
20120929	62.5	53.9	75.2
20120930	62.3	55.1	71.9

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