

# 第四组-彭璇

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## src

存放了Plotly绘图库的js源代码

assets	1.41.0	12 days ago
components	Merge pull request #2978 from plotly/scatter-layer-order	13 days ago
constants	Merge branch 'master' into stacked-area	17 days ago
css	fix: tooltip misplaced	3 months ago
fonts	Merge branch 'master' into rescatter-squashed	9 months ago
lib	Merge pull request #2986 from plotly/webgl-oncontext-loss	13 days ago
plot_api	Merge pull request #2974 from plotly/2969-responsive-charts	17 days ago
plots	Merge pull request #2850 from plotly/missing-fulldata	12 days ago
snapshot	fix Plotly.downloadImage when passing figure objects	a month ago
traces	Merge pull request #2850 from plotly/missing-fulldata	12 days ago
transforms	protect against non-numeric in change function	3 months ago
.eslintrc	eslint: define Promise and TypedArray globals in root rc file	2 years ago
core.js	1.41.0	12 days ago
locale-en-us.js	update 2017 -> 2018	9 months ago
locale-en.js	Added missing 'Saturday' string to locale-en	6 months ago
registry.js	replace Registry.call(", [] ) with Registry.call(", ...[] )	7 months ago

## 1 assets

里面只有一个js文件，寥寥数行代码，似乎是写版本号的地方

```
// package version injected by `npm run preprocess`
exports.version = '1.41.0';
```

## 2 components

- plotly是一个绘图的js库，所以components这个文件夹下是给出了该库所能绘制的各种图形效果

■ annotations	improve concatExtremes perf	2 months ago
■ annotations3d	add template attributes to array containers	3 months ago
■ calendars	a few small tweaks	8 months ago
■ color	update 2017 -> 2018	9 months ago
■ colorbar	fix the underlying problem that led to #970	a month ago
■ colorscale	fix dftl -> dflt typos	2 months ago
■ dragelement	fix #2598 - sloppy click on cartesian zoom	4 months ago
■ drawing	fix dynamic contour ordering and multi-heatmap-contour plots	2 months ago
■ errorbars	stacked area charts!	24 days ago
■ fx	Simplify clickmode / hovermode coercion code [1852]	17 days ago
■ grid	templates - big commit implementing most of it, coerce-level integration	3 months ago
■ images	add template attributes to array containers	3 months ago
■ legend	Merge pull request #2978 from plotly/scatter-layer-order	14 days ago
■ modebar	remove legacy toggleSpikelines hack	3 months ago
■ rangeselector	add template attributes to array containers	3 months ago
■ rangeslider	🔧 ax_min / ax_max logic for rangeslider	2 months ago
■ shapes	improve concatExtremes perf	2 months ago
■ sliders	fix test failures - and simplify handleArrayContainerDefaults even more	3 months ago
■ titles	replace selectAll().data([0]) with ensureSingle(ById)	6 months ago
■ updatemenus	template-safe GUI editing of array objects	3 months ago

## 2.1 annotations (标记/图形)

📄 arrow_paths.js
📄 attributes.js
📄 calc_autorange.js
📄 click.js
📄 common_defaults.js
📄 convert_coords.js
📄 defaults.js
📄 draw.js
📄 draw_arrow_head.js
📄 index.js

- arrow\_path.js: 一些标记的实现: 箭头 (arrow), 圆圈(Circle), 方形(square)... , 代码量只有数十行, 但是应该是定义了Plotly的所有图形类型
- attributes.js: 应该是实现各种标记的特效的地方——即可以更改各种标记的属性: size, color, opacity, alignment, border, etc..

```
// find the bounding boxes for each of these annotations'
// relative to their anchor points
// use the arrow and the text bg rectangle,
// as the whole anno may include hidden text in its bbox
```

- cal\_autorange.js: (这是代码中对于该文件的注释) 我的理解是, 这个js文件根据每个annotation的锚点, 确定它们的边框、轮廓, 以进行图形的绘制
- click.js: 鼠标点击事件所产生的特效
- common\_defaults.js: 各种annotation的默认效果
- convert\_coords.js: 图形(annotations)坐标系转换的处理算法
- defaults.js: 还是默认效果..感觉和common\_defaults作用很类似
- draw.js: 这里应该是各种标记的呈现层了, 相当于MVC中的View了; 具体地实现了各种标记怎么显示
- draw\_arrow\_head.js: 这里应该是“箭头”这个元素的呈现层了 (虽然不知道为什么要把箭头的实现给单独分离出来)
- index.js: 定义annotations这个模块在所有components中的一个所处角色以及可能与其他模块所存在的关系

## 2.2 annotations3d

对三维标记的实现及特效实现, 与annotation模块类似, 功能更少, 不做赘述

## 2.3 calendars

似乎是导入了不同地区的日历 (内容很少, 而且和图形没有关联)

## 2.4 color

定义各种颜色, 并且给到这些颜色的js实现

## 2.5 colorBar

建立在color模块上的模块, 对颜色进行了封装, 实现对具体对象、标记的颜色特效

## 2.6 colorscale

还是对color模块的封装

## 2.7 Others

其他的包 (如images, legend, shapes, etc), 也都是实现各自具体的功能, 不做赘述

## 3 constant

本包功能如其名字所言, 保存了plotly框架源代码中用到的所有常量, js文件内的内容皆是如下类型

```
module.exports = {  
  // from bottom left: this is the origin of our page  
  // positioning system  
  FROM_BL: {  
    left: 0,  
    center: 0.5,  
    right: 1,  
    bottom: 0,  
    middle: 0.5,  
    top: 1  
  },  
  // from top left: this is the screen pixel position  
  FROM_TL: {  
    left: 0,  
    center: 0.5,  
    right: 1,  
    bottom: 1,  
    middle: 0.5,  
    top: 0  
  },  
  // from bottom right: sometimes you just need the
```

## 4 css

---

还是如包名所言...保存的是plotly框架用到的一些基本CSS代码

## 5 Font


















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保存的是字体的特效

## 6 lib

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As expected...这是除了annotations外，第二个很大、功能很丰富的文件夹了

 <a href="#">angles.js</a>	make modHalf restrict output to "half" of Math.abs(input)	20 days ago
 <a href="#">clean_number.js</a>	update 2017 -> 2018	9 months ago
 <a href="#">clear_gl_c canvases.js</a>	Update deps, adapt line2d code	6 months ago
 <a href="#">clear_responsive.js</a>	several improvements to responsive charts	20 days ago
 <a href="#">coerce.js</a>	make modHalf restrict output to "half" of Math.abs(input)	20 days ago
 <a href="#">dates.js</a>	replace wrap360 with Lib.mod & wrap180 with new Lib.modHalf	20 days ago
 <a href="#">ensure_array.js</a>	update 2017 -> 2018	9 months ago
 <a href="#">events.js</a>	fix and  triggerHandlers for ".once" handlers	5 months ago
 <a href="#">extend.js</a>	[wip] a few todos	7 months ago
 <a href="#">filter_unique.js</a>	update 2017 -> 2018	9 months ago
 <a href="#">filter_visible.js</a>	Merge branch 'master' into polar	9 months ago
 <a href="#">geo_location_utils.js</a>	update 2017 -> 2018	9 months ago
 <a href="#">geojson_utils.js</a>	update 2017 -> 2018	9 months ago
 <a href="#">geometry2d.js</a>	replace wrap360 with Lib.mod & wrap180 with new Lib.modHalf	20 days ago
 <a href="#">get_graph_div.js</a>	update 2017 -> 2018	9 months ago
 <a href="#">gl_format_color.js</a>	move 3d parseColorScale to gl_format_color	4 months ago

(部分js文件名截图)

包里面存放的是第三方的js文件，实现了比较重要的有

- 对角度的操作 (angles.js)
- coerce.js (写的很杂，包含了对基本数据类型和对数组等基本数据结构的操作封装)
- 时间和日期的处理 (dates.js)
- regex.js(对正则表达式的处理)
- topojson\_utils.js(格式转换,tojson)
- polygon.js (多边形的js)

简而言之，lib这个包导入了很多外部的底层js，为plotly库的实现提供了很多便利

## 7 Plot\_api

plotly框架的api，导出了各种函数和变量（由Plotly提供），以供开发者调用

接口的数目实在太多，不一一列举

## 8 Plots

### 8.1 cartesian

笛卡尔坐标系变换

### 8.2 geo

几何图形/标记的布局、基本属性

### 8.3 gl2d

### 8.4 gl3d

# 9 snapshot

提供对各类图形/标记的

- 复制
- 粘贴
- 剪切
- 下载
- 转svg、
- 转图像

# 10 traces

各类图象

bar	Merge branch 'master' into 1852-persistent-click-via-selectPoints	18 days ago
barpolar	compute bar corners p0/p1/s0/s1 in crossTraceCalc	20 days ago
box	Merge pull request #2850 from plotly/missing-fulldata	13 days ago
candlestick	rename setPositions -> crossTraceCalc	2 months ago
carpet	refactor make_trace_groups to more general lib function	a month ago
choropleth	Merge branch 'master' into 1852-persistent-click-via-selectPoints	29 days ago
cone	fix #2723 - list correct 'color' attribute in cone,	3 months ago
contour	refactor make_trace_groups to more general lib function	a month ago
contourcarpet	refactor make_trace_groups to more general lib function	a month ago
contourgl	adapt gl2d to findExtremes	2 months ago
heatmap	refactor make_trace_groups to more general lib function	a month ago
heatmapgl	adapt gl2d to findExtremes	2 months ago
histogram	compute bar corners p0/p1/s0/s1 in crossTraceCalc	20 days ago
histogram2d	merge all colorscale attribute generator in one function	3 months ago
histogram2dcontour	add line styling to contour_legend test image and fix it for histogra...	a month ago
mesh3d	fix #2723 - list correct 'color' attribute in cone,	3 months ago
ohlc	Merge branch 'master' into 1852-persistent-click-via-selectPoints	29 days ago


parcoords	Merge branch 'master' into streamtube-traces	3 months ago
pie	use makeTraceGroups in pie	a month ago
pointcloud	adapt gl2d to findExtremes	2 months ago
sankey	sankey fix translateX for subplots	18 days ago
scatter	Merge pull request #2978 from plotly/scatter-layer-order	14 days ago
scatter3d	 unimplemented 'showscales' & 'colorbar' from scatter3d line attrs	2 months ago
scattercarpet	stacked area charts!	24 days ago
scattergeo	Merge pull request #2978 from plotly/scatter-layer-order	14 days ago
scattergl	Merge pull request #2990 from plotly/regl-line2d-bump	14 days ago
scattermapbox	Merge branch 'master' into 1852-persistent-click-via-selectPoints	18 days ago
scatterpolar	Merge branch 'master' into stacked-area	18 days ago
scatterpolargl	rename Polar.prototype.isPtWithinSector -> isPtInside	27 days ago
scatterternary	stacked area charts!	24 days ago
splom	Merge branch 'master' into 1852-persistent-click-via-selectPoints	29 days ago
streamtube	improve auto starting position algo	3 months ago
surface	fix #2723 - list correct 'color' attribute in cone,	3 months ago
table	ensure every trace defines _length in supplyDefaults, and abort trans...	5 months ago
violin	Merge branch 'master' into missing-fulldata	a month ago

## 包含

- 条
- 盒子
- 圆锥
- 热量图
- 历史数据图
- 散点图
- 曲线图 (2d&3d)
- 表

## 等等

# 11 transforms

aggregate.js	protect against non-numeric in change function	3 months ago
filter.js	standardize transforms handling of _length	5 months ago
groupby.js	cleaner handling of empty legend items, and groupby consistent with r...	5 months ago
helpers.js	update 2017 -> 2018	9 months ago
sort.js	 refactor sort transform from $O(n^2)$ to $O(n)$	5 months ago

实现的功能和js文件的名字一致，即对图形/图像的变换（聚合、过滤、分类、排序）

# 12 根目录下的其他js文件

## 12.1 core.js

```
// scatter is the only trace included by default
register(require('./traces/scatter'));

// register all registrable components modules
register([
    require('./components/fx'),
    require('./components/legend'),
    require('./components/annotations'),
    require('./components/annotations3d'),
    require('./components/shapes'),
    require('./components/images'),
    require('./components/updatemenus'),
    require('./components/sliders'),
    require('./components/rangeslider'),
    require('./components/rangeselector'),
    require('./components/grid'),
    require('./components/errorbars')
]);
```

(core.js文件中的一段代码)

根据代码和注释判断，这个文件应该是建立起components包中各组件之间的关联，对各个模块进行注册（what is registration?）

## 12.2 registry.js