# Let's Customize Those Visualizations

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.conf2016

splunk>

# Disclaimer

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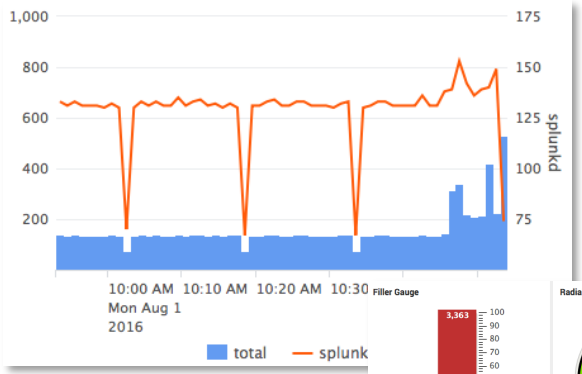
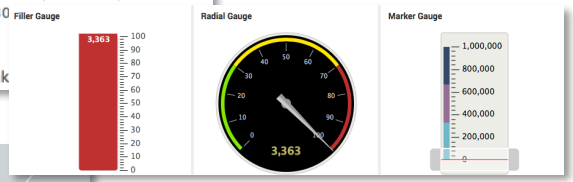
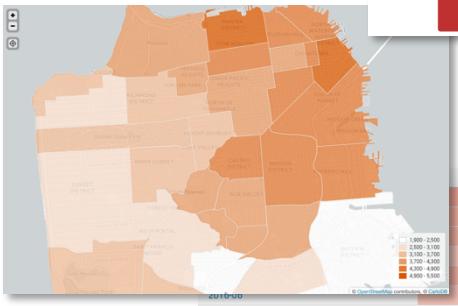
# “There’s A Visualization For That”

# Native Visualizations in Splunk







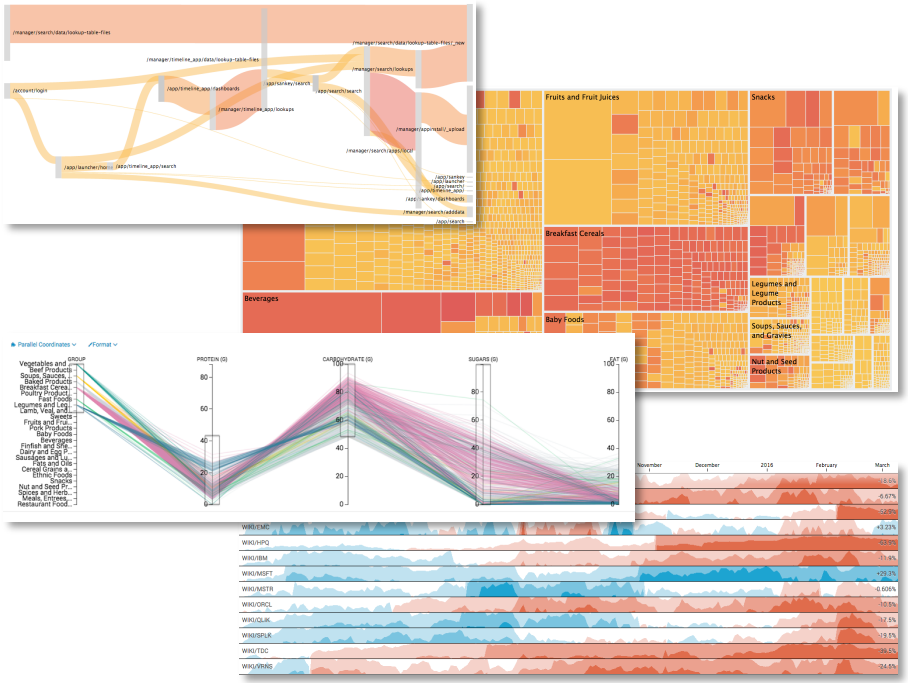
| | AMEX | DISCOVERY | MASTERCARD | VISA |
|---|---|---|---|---|
| | $ 166,186.06 | $ 29,434.37 | $ 212,916.32 | $ 283,329.64 |
| | $ 150,520.65 | $ 29,946.33 | $ 194,182.54 | $ 239,366.76 |
| | $ 146,676.29 | $ 34,393.74 | $ 229,345.94 | $ 212,084.70 |
| | $ 110,838.31 | $ 23,981.59 | $ 225,305.52 | $ 233,067.44 |
| | $ 147,225.95 | $ 25,792.21 | $ 257,715.24 | $ 261,559.76 |
| | $ 114,078.94 | $ 20,392.29 | $ 195,702.71 | $ 302,339.63 |
| 2016-07 | $ 6,362.45 | $ 54.84 | $ 5,150.22 | $ 622.17 |
| | $ 841,888.63 | $ 163,995.36 | $ 1,320,318.47 | $ 1,532,370.10 |
| | 21.8% | 4.3% | 34.2% | 39.7% |

- Native charts and maps
  - Bar / Line / Area charts
  - Bubble / Scatter plots
  - Gauges
  - Maps
  - Single Value Displays
  - Tables
- Generalized to fit use cases across many different areas
- Can be customized to some extent to cover specific use cases

# Custom Visualization, the “old” way

- Custom `<html>` dashboard panels
- Requires changing app source code
- Only way to re-use across apps is to copy source to another app
- Non-trivial SimpleXML to make it work
- Much native functionality didn’t work out of the box
  - Panel height
  - Resize events
  - Customization by end-users

# Custom Visualizations




- Platform **extensibility** framework and API
- Targeted at internal and external **developers** with web development / JS skills and basic knowledge of the Splunk platform
- Developers can make use of any third party libraries (d3.js, three.js, highcharts.js, etc…) that run in the browser*

* with minor adjustments, and if third party license permits such use

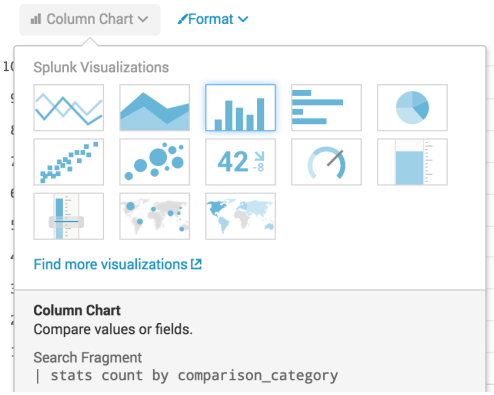
# Custom Visualizations for Developers

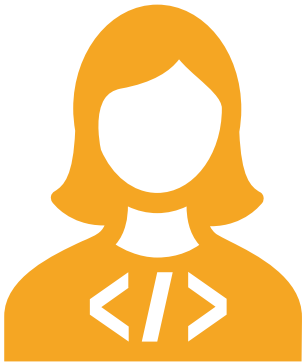
## Framework

- Javascript API that receives search results
- Declarative (HTML) API to expose format controls
- Visualizations picked up automatically to be shown in visualization picker
- All other aspects (permission, layering, app management etc) that apply to other knowledge objects

```
updateView: function(data, config)
```

```
<label class="control-label">Show Change In</label>
<div class="controls controls-block control-group controls-fill ">
    <splunk-radio-input name="display.visualizations.custom.
    horizon_chart_app.horizon_chart.show_change_in_percent" value="1">
        <option value="1" selected>Percent</option>
        <option value="0">Absolute Value</option>
    </splunk-radio-input>
</div>
```



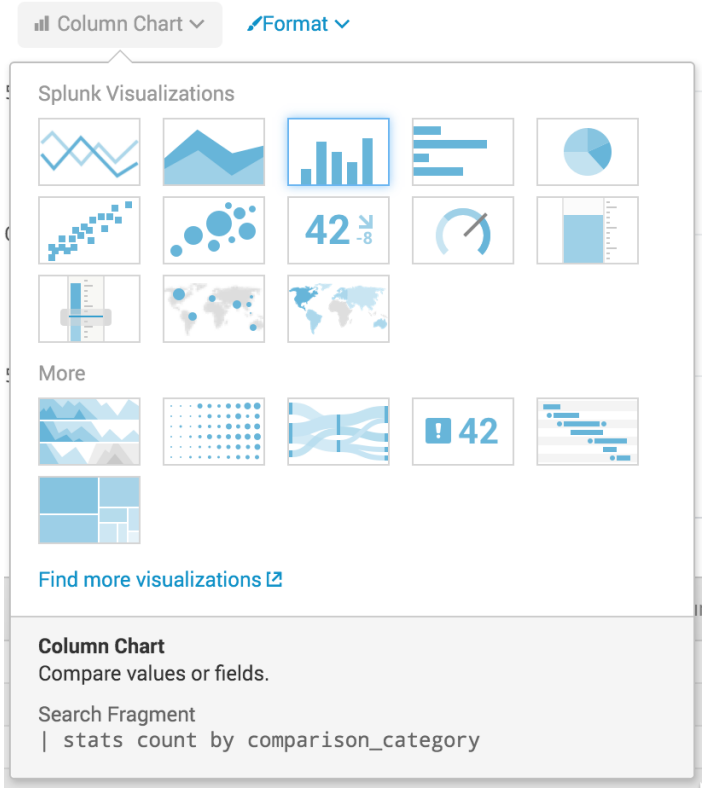
# Custom Visualizations for Admins

- **Packaged as an app!**
- Installed like any other app
- No more copy/paste of code across apps
- Same permissioning / layering model
- Installed visualizations are automatically picked up by any other app if permissions are set that way

tools by Dolly Vu from the Noun Project

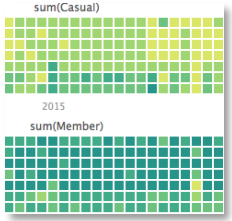
# Custom Visualizations for Users

- Choose from potentially dozens of installed visualizations!
- Appears as a first-class citizen alongside native visualizations
  - Looks and works just like packaged native visualizations
- Customize functionality and appearance of the visualization without touching any code, straight from the UI

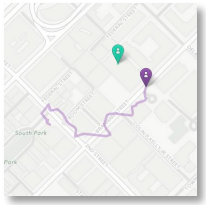


# New Splunk Visualizations

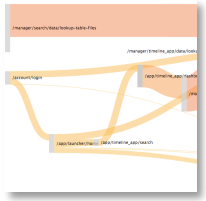
Punchcard




Calendar Heat Map



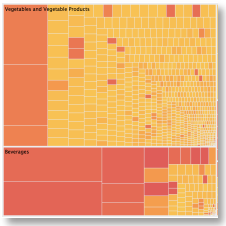
Location Tracker



Sankey Diagram

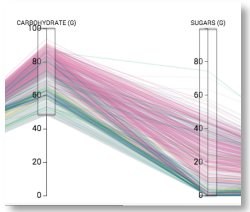

Bullet Graph

Timeline

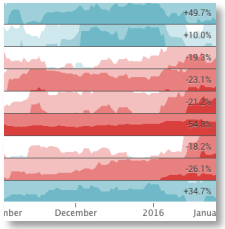


Treemap


Horseshoe Meter




Parallel Coordinates

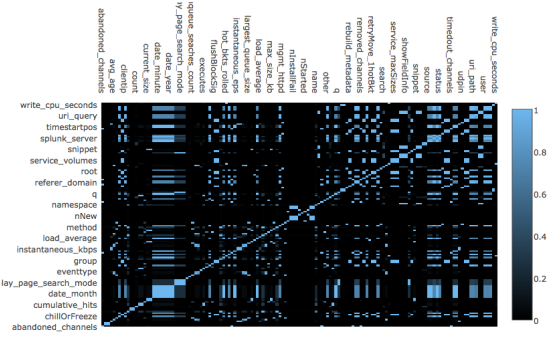



Horizon Chart

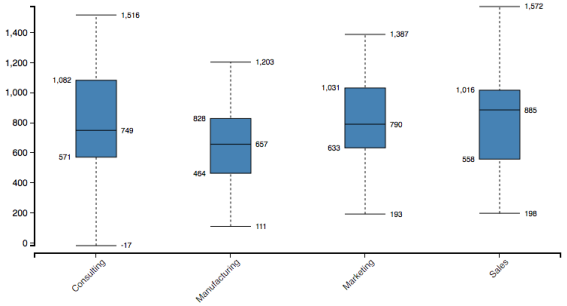

Machine Learning Charts

*Multiple use cases across IT, security, IoT, and business analytics*

# New Partner / Community Visualizations

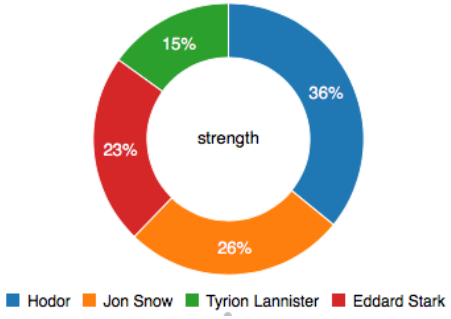



Heat Map

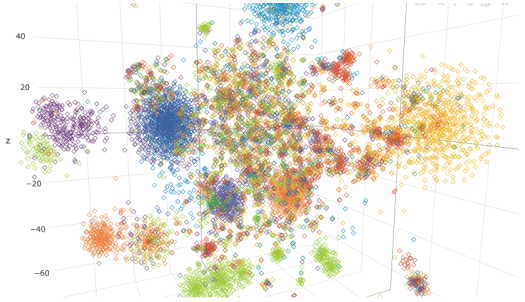



Box Plot


Wordcloud

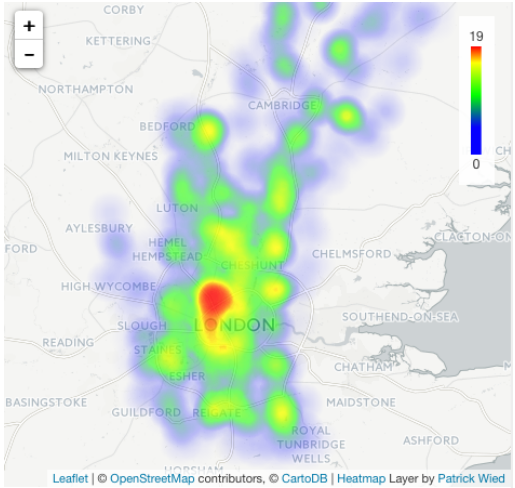



Donut Chart



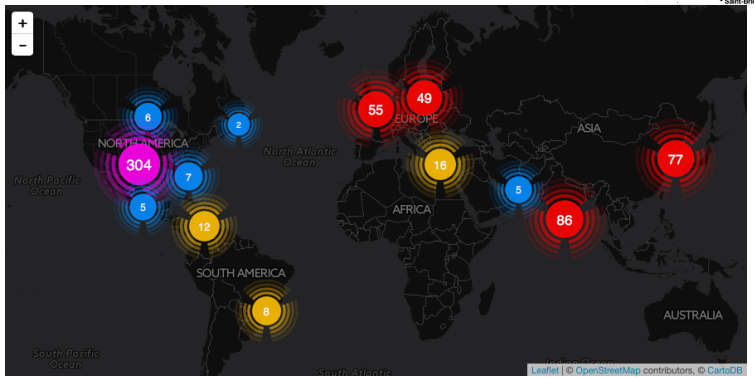

3D scatter plot

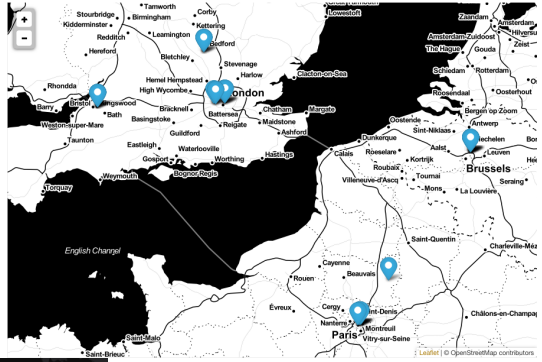
# New Partner / Community Visualizations




Geo Heatmap

Custom Cluster Map

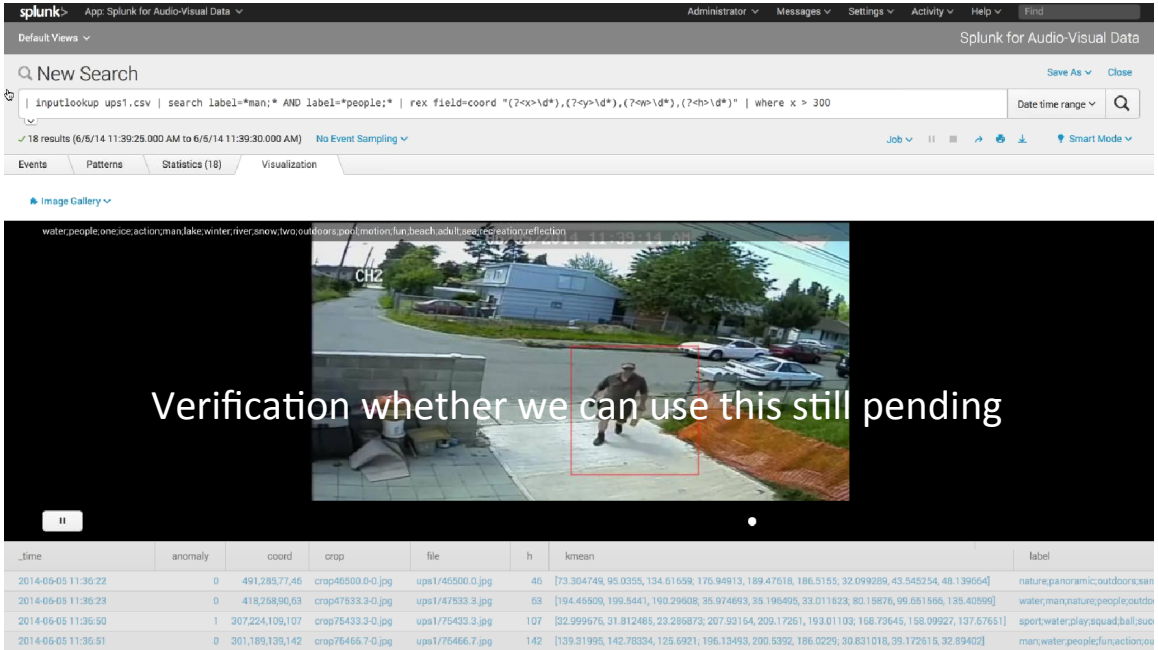



Clustered Single Value Map

# What's possible beyond that?

- **Anything that works in the browser**
- Video
- Interactivity
- WebGL



# THANK YOU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