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| --- | --- | --- | --- | --- |
| Chart Type | Chart JS | D3.js | HighCharts.js | ngx-charts |
| Chart UI look and feel | |  |  |  |  |  | | --- | --- | --- | --- | --- | | **Type** | **Chart.js** | **D3.js** | **HighCharts.js** | **ngx-charts** | | Combined Types |  |  |  |  | | Line |  |  |  |  | | Bar |  |  |  |  | | Horizontal Bar |  |  |  |  | | Pie/Doughnut |  |  |  |  | | Polar Area |  |  |  |  | | Radar |  |  |  |  | | Scatter |  |  |  |  | | Bubble |  |  |  |  | | Gauges |  |  |  |  | | Maps (Heat/Tree/etc.) |  |  |  |  | | | | |
| Bitmap graphics  Redraws charts on window resize for perfect scale granularity.  Web view:    Mobile view: | Vector graphics  Web view:    Mobile view: | Vector graphics  Web view:    Mobile view: | Vector graphics  Web view:    Mobile view: |
| Data integration | * Can fetch data from MySQL Database | * Can connect d3.js with relational databases using API. | * Load data from the database into High charts with Ajax | * Same as D3.js it loads data from relational databases. |
| Multi chart view with same data set | * Can functioned with same data set or data structure on every chart type | * Can functioned with same data set or data structure on every chart type | * Can functioned with same data set or data structure on every chart type | * Can functioned with same data set or data structure on every chart type |
| Speed performance and response | * Great rendering performance across all modern browsers. * It uses HTML5 canvas element for rendering charts and polyfills support to work on IE7/8. The charts are all responsive. | * D3 is extremely fast, supporting large datasets and dynamic behaviors for interaction and animation | * Fastest development and implementation * Intelligently adapts to any device and supports multi touch gestures | * Speed is good and uses d3 for the math functions, scales, axis and shape generators. * So if we are using legends based algorithms this is more suitable than others |
| Ease of use | * Tiny open source library. Free for all uses * Built-in Charts | * Full capabilities of modern browsers without tying yourself to a proprietary framework, combining powerful visualization components and a data-driven approach to DOM manipulation. | * Provides timeline charts * Multi-platform charting library | * Can create charts using Angular components |
| Programmable | * Can update chart data dynamically | * D3 uses enter, update, exit pattern for handling dynamic data. In other words it can update graph data automatically | * Check out dynamically updated data graphs:   [Dynamic update](https://www.highcharts.com/stock/demo/dynamic-update) | * Can use graphs dynamically according to real time data * For real time data:   [Charts for real-time data](https://swimlane.github.io/ngx-charts/%23/ngx-charts/bar-vertical) |
| Advance features summary | * This is simple in use and used charts by canvas element | * Contains stunning visual effects and graphics * Data driven: static data or fetching data from remote servers * Uses pre-existing conventions | * Touch and mobile optimized * Contains with High-chart products such as Highstock,Highmaps etc. * Boost module for big data * Contains an exporting module | * Auto scaling * Timeline filtering * Advanced label positioning * Real time data support * Advanced tooltips * Responsive layouts * Data point event handlers * Animations |