 [Chart.js](http://docs.google.com/docs/3.9.1/)

[Home](http://docs.google.com/docs/3.9.1/)

[API](http://docs.google.com/docs/3.9.1/api/)

[Samples](http://docs.google.com/docs/3.9.1/samples/)

Ecosystem Ecosystem

* [Awesome (opens new window)](https://github.com/chartjs/awesome)
* [Slack (opens new window)](https://chartjs-slack.herokuapp.com/)
* [Stack Overflow (opens new window)](https://stackoverflow.com/questions/tagged/chart.js)

[GitHub (opens new window)](https://github.com/chartjs/Chart.js)

[Home](http://docs.google.com/docs/3.9.1/)

[API](http://docs.google.com/docs/3.9.1/api/)

[Samples](http://docs.google.com/docs/3.9.1/samples/)

Ecosystem Ecosystem

* [Awesome (opens new window)](https://github.com/chartjs/awesome)
* [Slack (opens new window)](https://chartjs-slack.herokuapp.com/)
* [Stack Overflow (opens new window)](https://stackoverflow.com/questions/tagged/chart.js)

[GitHub (opens new window)](https://github.com/chartjs/Chart.js)

* [Information](http://docs.google.com/docs/3.9.1/samples/information.html)
* Bar Charts
* Line Charts
* Other charts
* Area charts
* Scales
* Scale Options
* Legend
* Title
* Subtitle
* Tooltip
* Scriptable Options
* Animations
* Advanced
  + [Data Decimation](http://docs.google.com/docs/3.9.1/samples/advanced/data-decimation.html)
  + [Derived Axis Type](http://docs.google.com/docs/3.9.1/samples/advanced/derived-axis-type.html)
  + [Derived Chart Type](http://docs.google.com/docs/3.9.1/samples/advanced/derived-chart-type.html)
  + [Linear Gradient](http://docs.google.com/docs/3.9.1/samples/advanced/linear-gradient.html)
  + [Programmatic Event Triggers](http://docs.google.com/docs/3.9.1/samples/advanced/programmatic-events.html)
  + [Animation Progress Bar](http://docs.google.com/docs/3.9.1/samples/advanced/progress-bar.html)
  + [Radial Gradient](http://docs.google.com/docs/3.9.1/samples/advanced/radial-gradient.html)
* Plugins
* [Utils](http://docs.google.com/docs/3.9.1/samples/utils.html)

[**#**](#gjdgxs) Data Decimation

This example shows how to use the built-in data decimation to reduce the number of points drawn on the graph for improved performance.

decimation data setup actions

const decimation = { enabled: false, algorithm: 'min-max', };

const decimation = {  
 enabled: false,  
 algorithm: 'min-max',  
};

const NUM\_POINTS = 100000; Utils.srand(10); // parseISODate returns a luxon date object to work with in the samples // We will create points every 30s starting from this point in time const start = Utils.parseISODate('2021-04-01T00:00:00Z').toMillis(); const pointData = []; for (let i = 0; i < NUM\_POINTS; ++i) { // Most data will be in the range [0, 20) but some rare data will be in the range [0, 100) const max = Math.random() < 0.001 ? 100 : 20; pointData.push({x: start + (i \* 30000), y: Utils.rand(0, max)}); } const data = { datasets: [{ borderColor: Utils.CHART\_COLORS.red, borderWidth: 1, data: pointData, label: 'Large Dataset', radius: 0, }] };

const NUM\_POINTS = 100000;  
Utils.srand(10);  
// parseISODate returns a luxon date object to work with in the samples  
// We will create points every 30s starting from this point in time  
const start = Utils.parseISODate('2021-04-01T00:00:00Z').toMillis();  
const pointData = [];  
for (let i = 0; i < NUM\_POINTS; ++i) {  
 // Most data will be in the range [0, 20) but some rare data will be in the range [0, 100)  
 const max = Math.random() < 0.001 ? 100 : 20;  
 pointData.push({x: start + (i \* 30000), y: Utils.rand(0, max)});  
}  
const data = {  
 datasets: [{  
 borderColor: Utils.CHART\_COLORS.red,  
 borderWidth: 1,  
 data: pointData,  
 label: 'Large Dataset',  
 radius: 0,  
 }]  
};

const config = { type: 'line', data: data, options: { // Turn off animations and data parsing for performance animation: false, parsing: false, interaction: { mode: 'nearest', axis: 'x', intersect: false }, plugins: { decimation: decimation, }, scales: { x: { type: 'time', ticks: { source: 'auto', // Disabled rotation for performance maxRotation: 0, autoSkip: true, } } } } };

const config = {  
 type: 'line',  
 data: data,  
 options: {  
 // Turn off animations and data parsing for performance  
 animation: false,  
 parsing: false,  
 interaction: {  
 mode: 'nearest',  
 axis: 'x',  
 intersect: false  
 },  
 plugins: {  
 decimation: decimation,  
 },  
 scales: {  
 x: {  
 type: 'time',  
 ticks: {  
 source: 'auto',  
 // Disabled rotation for performance  
 maxRotation: 0,  
 autoSkip: true,  
 }  
 }  
 }  
 }  
};

const actions = [ { name: 'No decimation (default)', handler(chart) { chart.options.plugins.decimation.enabled = false; chart.update(); } }, { name: 'min-max decimation', handler(chart) { chart.options.plugins.decimation.algorithm = 'min-max'; chart.options.plugins.decimation.enabled = true; chart.update(); }, }, { name: 'LTTB decimation (50 samples)', handler(chart) { chart.options.plugins.decimation.algorithm = 'lttb'; chart.options.plugins.decimation.enabled = true; chart.options.plugins.decimation.samples = 50; chart.update(); } }, { name: 'LTTB decimation (500 samples)', handler(chart) { chart.options.plugins.decimation.algorithm = 'lttb'; chart.options.plugins.decimation.enabled = true; chart.options.plugins.decimation.samples = 500; chart.update(); } } ];

const actions = [  
 {  
 name: 'No decimation (default)',  
 handler(chart) {  
 chart.options.plugins.decimation.enabled = false;  
 chart.update();  
 }  
 },  
 {  
 name: 'min-max decimation',  
 handler(chart) {  
 chart.options.plugins.decimation.algorithm = 'min-max';  
 chart.options.plugins.decimation.enabled = true;  
 chart.update();  
 },  
 },  
 {  
 name: 'LTTB decimation (50 samples)',  
 handler(chart) {  
 chart.options.plugins.decimation.algorithm = 'lttb';  
 chart.options.plugins.decimation.enabled = true;  
 chart.options.plugins.decimation.samples = 50;  
 chart.update();  
 }  
 },  
 {  
 name: 'LTTB decimation (500 samples)',  
 handler(chart) {  
 chart.options.plugins.decimation.algorithm = 'lttb';  
 chart.options.plugins.decimation.enabled = true;  
 chart.options.plugins.decimation.samples = 500;  
 chart.update();  
 }  
 }  
];

## [**#**](#30j0zll) Docs

* [Data Decimation](http://docs.google.com/docs/3.9.1/configuration/decimation.html)
* [Line](http://docs.google.com/docs/3.9.1/charts/line.html)
* [Time Scale](http://docs.google.com/docs/3.9.1/axes/cartesian/time.html)

Last Updated: 8/3/2022, 12:46:38 PM

←  [Progressive Line With Easing](http://docs.google.com/docs/3.9.1/samples/animations/progressive-line-easing.html)   [Derived Axis Type](http://docs.google.com/docs/3.9.1/samples/advanced/derived-axis-type.html)  →