Synopsis

Summary
D3.js in Action is a practical tutorial for creating interactive graphics and data-driven applications using D3.js. You'll start with in-depth explanations of D3's out-of-the-box layouts, along with dozens of practical use cases that align with different types of visualizations. Then, you'll explore practical techniques for content creation, animation, and representing dynamic data including interactive graphics and data streamed live over the web. The final chapters show you how to use D3's rich interaction model as the foundation for a complete web application. In the end, you'll be ready to integrate D3.js into your web development process and transform any site into a more engaging and sophisticated user experience.

Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications.

About the Technology
D3.js is a JavaScript library that allows data to be represented graphically on a web page. Because it uses the broadly supported SVG standard, D3 allows you to create scalable graphs for any modern browser. You start with a structure, dataset, or algorithm and programmatically generate static, interactive, or animated images that responsively scale to any screen.

About the Book
D3.js in Action introduces you to the most powerful web data visualization library available and shows you how to use it to build interactive graphics and data-driven applications. You'll start with dozens of practical use cases that align with different types of charts, networks, and maps using D3's out-of-the-box layouts. Then, you'll explore practical techniques for content design, animation, and representation of dynamic data including interactive graphics and live streaming data.

What's Inside
- Interacting with vector graphics
- Expressive data visualization
- Creating rich mapping applications
- Prepping your data
- Complete data-driven web apps in D3

Readers need basic HTML, CSS, and JavaScript skills. No experience with D3 or SVG is required.

About the Author
Elijah Meeks is a senior data visualization engineer at Netflix. His D3.js portfolio includes work at Stanford University and with well-known companies worldwide.

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D3.js on mobile (available online only)

Book Information
Paperback: 352 pages
Publisher: Manning Publications; 1 edition (March 15, 2015)
The D3.js library is very powerful and full of useful choices and possibilities. But, you should not try to tackle Elijah Meeks's new book if you are a newcomer who has not yet gotten fairly comfortable with JavaScript, HTML, CSS and JSON. It also helps to understand how CSVs (Comma Separated Values) can be used. And you should know how to set up and run a local web server on your computer. However, prior knowledge of D3.js and SVG (Scalable Vector Graphics) is not necessary. Some reviewers have remarked on the amount of how-to and technical information packed into D3.js in Action. It is indeed impressive. And, yes, it really can seem like the concepts, details and examples are being squirted at you from a fire hose, particularly if you are attempting to race through the text. As Elijah Meeks has pointed out: "[T]he focus of this book is on a more exhaustive explanation of key principles of the library." So plan to take your time. Tackle D3.js in small bites, using the d3js.org website, this text and other sources. I am pretty new to learning data visualization, and I definitely had never heard of visualizations such as Voronoi diagrams, nor tools such as TopoJSON, until I started working my way through this book. And those are just a few of the available possibilities. Like most of the other reviewers, I have not yet tried all of the code examples. But the ones I have tested have worked very well, and they have gotten me thinking about how I can adapt them to use in some of my work. I am a bit disappointed that the book takes 40 pages to get to the requisite "Hello, world" examples. And once you arrive, the explanations likely will seem a bit murky and incomplete to some readers. However, that is a minor complaint. D3.

The JavaScript steamroller rolls on winning more territory in the battle for programming languages, with yet another excellent JavaScript-library in the form of D3.js. D3.js (âœData-driven
documentsâ•) is a library enabling to perform dynamic interactive data visualizations in the browser. It is not your typical library allowing to call plot, graph, histogram, scatterplot high-level graphic functions, but it provides the necessary primitives to be able to build your own visualizations. This allows much greater control over the result giving much power to the developer. For a glimpse of the possibilities with D3.js search for âœChristophe Viauâ™s D3.js galleryâ• or to see the authors own gallery, search for âœblocks.org emeeksâ• - impressive stuff. This book by Elijah Meeks, a Data Visualization Engineer with Netflix gives an excellent introduction to the subject. I must admit Iâ™m not very experienced with JavaScript and so I worked through a lot of the examples with browser and web server-* to force myself to follow. This isnâ™t strictly necessary as the source code for all examples is included and having tested it all with a web server I attest that the examples work! Some examples are quite basic to demonstrate a point, and are progressively developed to produce some impressive visualizations. Very impressive, for example, to have a table of information and to be able to sort rows, or sort columns by the press of a button and see the rows or columns move graciously to their sorted positions. Also very impressive is to see a dashboard with different representations of the same dataset, and to see subsets of the data highlighted in the three views as you hover the mouse over the subset in one of the views. The book is divided into three parts.

Elijah Meeksâ™ D3.js in Action (D3iA) reflects how amazingly feature-rich D3 is; in some senses, itâ™s like trying to take a drink from a fire hose. Thereâ™s a lot to D3.js and this book covers it! Not to worry, though; Elijah guides you through D3â™s many features with extensive, well-documented examples. I have done some charting in my career but D3iA opened my eyes to the expansive world of data/information visualization. Yes, D3iA covers the basics (things I already knew about) like line, bar, stacked bar, pie charts and histograms and some variations of the basics (e.g., donut/ring charts and exploded pie charts). But I also learned about more advanced charting techniques like pack and tree (dendograms) layouts for representing hierarchical data, streamgraphs, Sankey diagrams, creating Word clouds, network diagrams (force-directed layouts, adjacency matrices and arc diagrams). As software engineers, D3iA guides us to the best methods we should employ to represent the types of data weâ™re working with (just because you can represent data in a certain way, doesnâ™t mean that you should do it that way). The book devotes an entire chapter to geospatial information visualization; not only can you implement your standard mapping; you can also plot information on those maps (à la push pins on the maps of yesteryear). D3iA also discusses using HTML5â™s canvas in collaboration with SVG. Now that I have done the 30,000 foot âœflyoverâ•, I plan to go through the book a second time and dive more
deeply into each of the examples. There’s a lot to digest!

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