Data Visualization with JavaScript Training Course

Professional Development Training Course Outline

Category	Research and Data Analysis	**Duration**	5 Days
Base Fee	$1,500 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

In today's data-driven world, professionals must transform complex datasets into visually compelling and interactive narratives. Data Visualization with JavaScript Training Course leverages powerful JavaScript libraries like D3.js and Chart.js to equip learners with industry-relevant skills in dynamic charting, data storytelling, and web-based visual analytics. Designed with an emphasis on real-world applications, this course empowers participants to build rich, responsive, and scalable visualizations for dashboards, reports, and interactive web interfaces.

Through a hands-on and project-oriented approach, learners will explore cutting-edge trends in data representation, tackle practical challenges, and integrate visualization tools with modern web technologies. The course is ideal for analysts, developers, and designers who aim to master custom visualization techniques, enhance data communication, and stay competitive in fields such as business intelligence, data science, and frontend development.

Programme Curriculum

Data Visualization with JavaScript Training Course

Introduction

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Course Objectives

1. Master the fundamentals of JavaScript for data visualization.
2. Understand the architecture and ecosystem of D3.js and Chart.js.
3. Create dynamic, interactive charts using D3.js.
4. Build real-time visual dashboards using Chart.js.
5. Apply data wrangling techniques for visualization prep.
6. Integrate external APIs for live data visualizations.
7. Implement animations and transitions for storytelling.
8. Utilize scalable vector graphics (SVG) for rendering precision.
9. Design accessible and responsive visualizations.
10. Optimize performance for large-scale datasets.
11. Embed visualizations in web and mobile applications.
12. Apply best practices in UX/UI design for data visuals.
13. Analyze and present data using effective storytelling frameworks.

Target Audiences

1. Front-end Web Developers
2. Data Analysts & Scientists
3. Business Intelligence Professionals
4. UX/UI Designers
5. Digital Marketing Analysts
6. IT Consultants & Engineers
7. Software Development Teams
8. Students & Educators in Data Science

Course Duration: 5 days

Course Modules

Module 1: Introduction to JavaScript & Visualization Basics

- JavaScript essentials for data visualization
- Understanding datasets: JSON, CSV, and APIs
- Introduction to data visualization theory
- Setting up development environments
- Using HTML5, CSS3, and JS in tandem
- **Case Study:** Visualizing weather data from OpenWeather API

Module 2: Fundamentals of D3.js

- D3.js syntax and selection methods
- Binding data to DOM elements
- Working with scales and axes
- Creating basic charts (bar, line, pie)
- Exploring SVG manipulation with D3
- **Case Study:** COVID-19 trend analysis chart

Module 3: Advanced D3.js Techniques

- Data joins and updates
- Implementing transitions and animations
- Hierarchical data (trees, treemaps)
- Geographic data and mapping

- Tooltip and interaction design
- **Case Study:** Building a dynamic population pyramid

Module 4: Chart.js for Quick Dashboards

- Overview of Chart.js and installation
- Creating responsive charts (bar, doughnut, radar, etc.)
- Chart customization and plugins
- Real-time data updates with Chart.js
- Comparing D3 vs Chart.js use cases
- **Case Study:** Real-time sales dashboard

Module 5: Data Wrangling & Integration

- Cleaning and preparing data with JavaScript
- Parsing APIs and handling asynchronous data
- Data transformation and filtering techniques
- Integrating third-party data sources
- Combining multiple datasets into one view
- **Case Study:** Merging census and health data sets

Module 6: Interactive Dashboards & UX Principles

- Building multi-view dashboards
- Implementing filtering and drill-downs
- Responsive design for mobile data viz
- Color theory and accessibility in design
- Usability testing of dashboards
- **Case Study:** Interactive dashboard for NGO reporting

Module 7: Performance & Optimization

- Efficient DOM rendering with D3.js
- Minimizing memory usage and runtime
- Lazy loading visual elements
- Optimizing for large datasets
- Debugging and performance profiling
- **Case Study:** Visualizing 1 million+ data points

Module 8: Project Presentation & Deployment

- Final project development and review
- Hosting visualizations on the web (Netlify, GitHub Pages)
- Embedding visuals in blogs and apps
- Client-ready data storytelling practices
- Peer feedback and improvements
- **Case Study:** Capstone project – Data story of global energy trends

Training Methodology

- Hands-on coding exercises after each module
- Real-world case study projects with datasets
- Interactive quizzes and assessments
- Group collaboration and peer code reviews
- Access to a curated library of templates and resources

Register as a group from 3 participants for a Discount

Send us an email: info@fineskilltrainingcenter.org or call *+254769199797*

Certification

Upon successful completion of this training, participants will be issued with a globally- recognized certificate.

Tailor-Made Course

We also offer tailor-made courses based on your needs.

Key Notes

a. The participant must be conversant with English.

b. Upon completion of training the participant will be issued with an Authorized Training Certificate

c. Course duration is flexible and the contents can be modified to fit any number of days.

d. The course fee includes facilitation training materials, 2 coffee breaks, buffet lunch and A Certificate upon successful completion of Training.

e. One-year post-training support Consultation and Coaching provided after the course.

f. Payment should be done at least a week before commence of the training, to Fineskill Training Center account, as indicated in the invoice so as to enable us prepare better for you.

Upcoming Scheduled Sessions

Start Date	End Date	Location	Price
23 Nov 2026	27 Nov 2026	Online	$1,000
23 Nov 2026	27 Nov 2026	Physical	$1,500
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$4,500
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$6,000

Ready to enroll or request a customized program? Book online or contact us:

Register Online Now

Email: info@fineskilltrainingcenter.com | Website: www.fineskilltrainingcenter.com