

DataVista Analytics

Explore. Visualize. Understand. Your data, made simple.

DataVista Analytics is a web-based toolkit that takes the friction out of working with data. Whether you're a student digging into a dataset for the first time or someone who just wants clean, honest statistics without fighting a spreadsheet this is built for you.

What It Does

At its core, DataVista lets you upload a dataset and immediately start making sense of it. No setup headaches, no steep learning curves. Just drop in your data and start exploring.

Here's a quick overview of what you can do:

****Understand your data's shape****

Upload a file and get an instant breakdown — structure, column types, missing values, and a data quality summary. Think of it as a health check for your dataset before you dive deeper.

****Visualize patterns****

Generate interactive charts and distribution plots to spot trends, outliers, and relationships that raw numbers can hide. Seeing data visually changes how you think about it.

****Run real statistical analysis****

DataVista covers the essentials of applied statistics:

- Descriptive statistics (mean, median, variance, and more)
- Probability distributions
- Hypothesis testing
- Normality testing
- ANOVA analysis

****Export your findings****

Once you've explored, you can generate a report and export your results — handy for documentation, presentations, or sharing with teammates.

****Work the way you want****

The interface supports light and dark mode, keyboard shortcuts, and includes a built-in statistical glossary so you're never left wondering what a term means.

Getting Started

You'll need Node.js installed. Then:

```
```bash
Clone the repository
git clone https://github.com/pavan23sai/Data-Analysis-Toolkit.git
Move into the project folder
cd Data-Analysis-Toolkit
Install dependencies
npm install
Start the development server
npm run dev
```
```

Open your browser and go to http://localhost:3000. That's it.

Building for Production

When you're ready to ship:

```
```bash
npm run build # Creates an optimized production build
npm start # Runs it
```
```

The project deploys cleanly to **Vercel**, **GitHub Pages**, or any static hosting platform.

Tech Stack

DataVista is built on a modern, well-supported foundation:

- **Next.js** — framework and routing
- **React** — UI components
- **TypeScript** — type-safe development
- **Tailwind CSS** — styling
- Statistical computing libraries under the hood

Who This Is For

DataVista grew out of a desire to make data analysis approachable. If you've ever wanted to explore a dataset but found tools like R or Python overwhelming to set up, or if you just want something that works in the browser without installing anything this project was made with you in mind.

It covers the core areas of:

- Exploratory Data Analysis (EDA)
- Descriptive and inferential statistics
- Probability and distributions
- Data visualization

Whether you're learning these concepts for the first time or revisiting them, DataVista tries to be a reliable companion.

About

Built by ****Pavan Sai Kumar Reddy Buchupalle****.

If DataVista has been useful to you, a  on the [repository](<https://github.com/pavan23sai/Data-Analysis-Toolkit>) goes a long way — it helps others find the project too.