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**Vellore Institute of Technology**  
(Deemed to be University under section 3 of UGC Act, 1956)

## Course Project

Internet and Web Programming

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Slot: E2+TE2

Course Code: BCSE404L

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## Background

In the modern day, training AI and ML models for domain specific implementations. For this, we need to quickly view and analyse the datasets available online in various formats like JSON APIs, csv files, etc.

## Problem Statement

Dockerized Multi-source data acquisition, visualization and analysis dashboard using HTML, CSS, JS, NodeJs and MongoDB.

## Demo Video Link

[https://drive.google.com/file/d/1YF53MEk7DM9iU21KHCA7YUvbs\\_5q1\\_FJ/view?usp=sharing](https://drive.google.com/file/d/1YF53MEk7DM9iU21KHCA7YUvbs_5q1_FJ/view?usp=sharing)

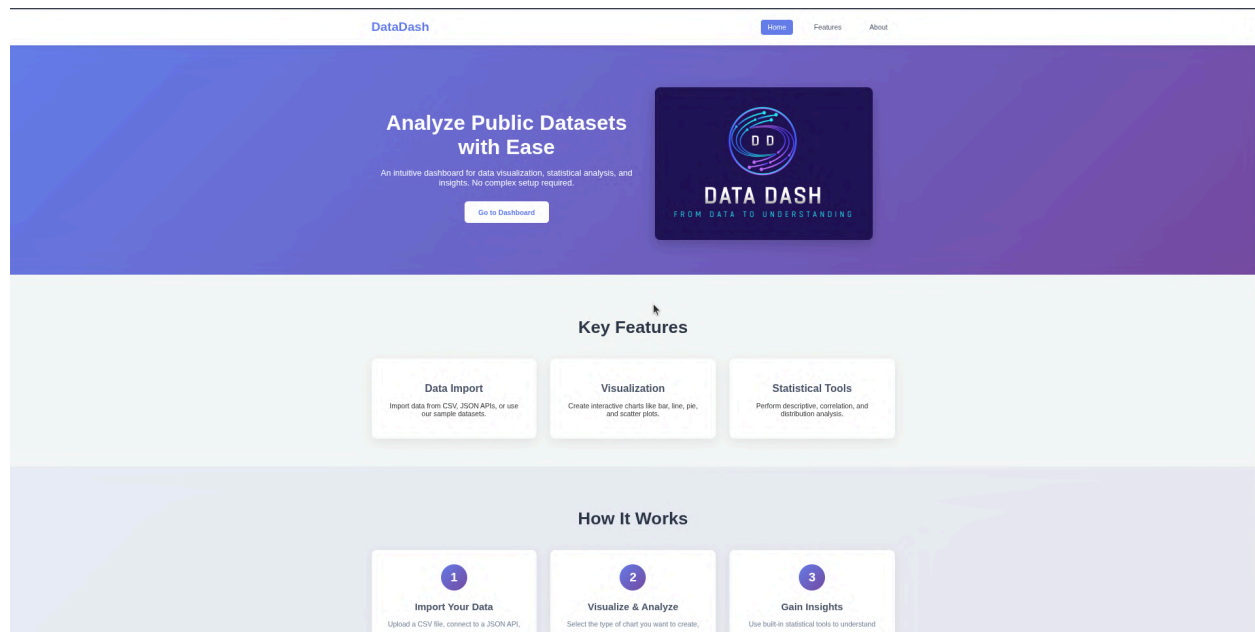
## Github Link

The entire code is available at as its too big:

<https://github.com/exMachina316/Data-Analysis-and-Plotting>

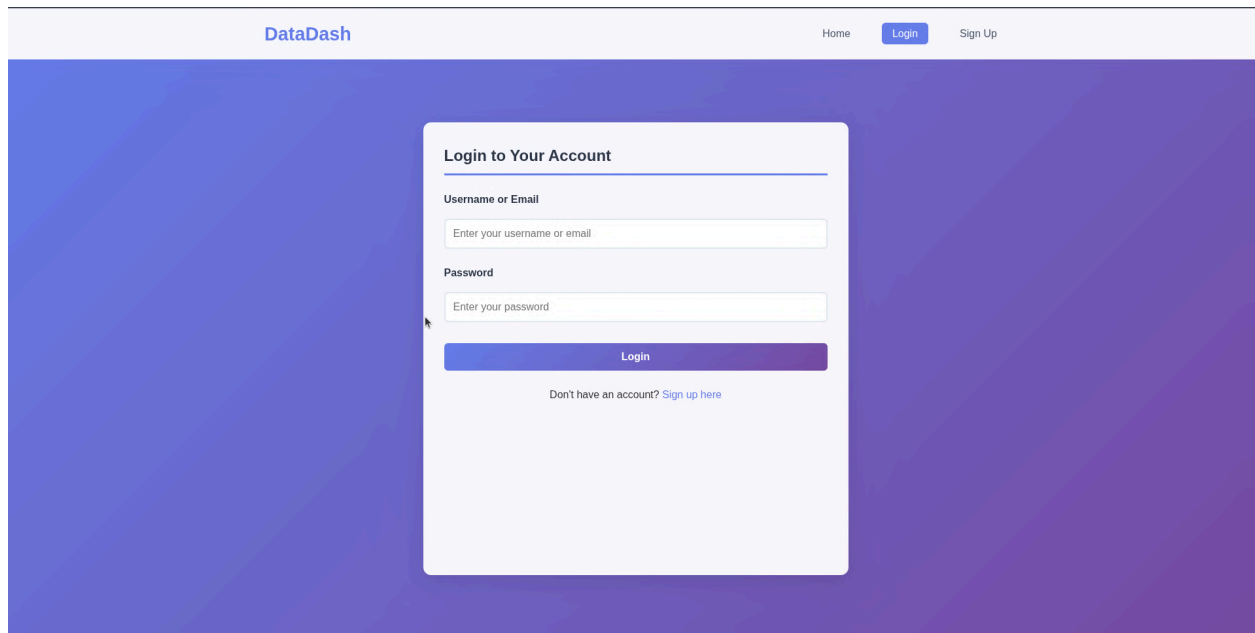
## Results

### 1. Landing Page



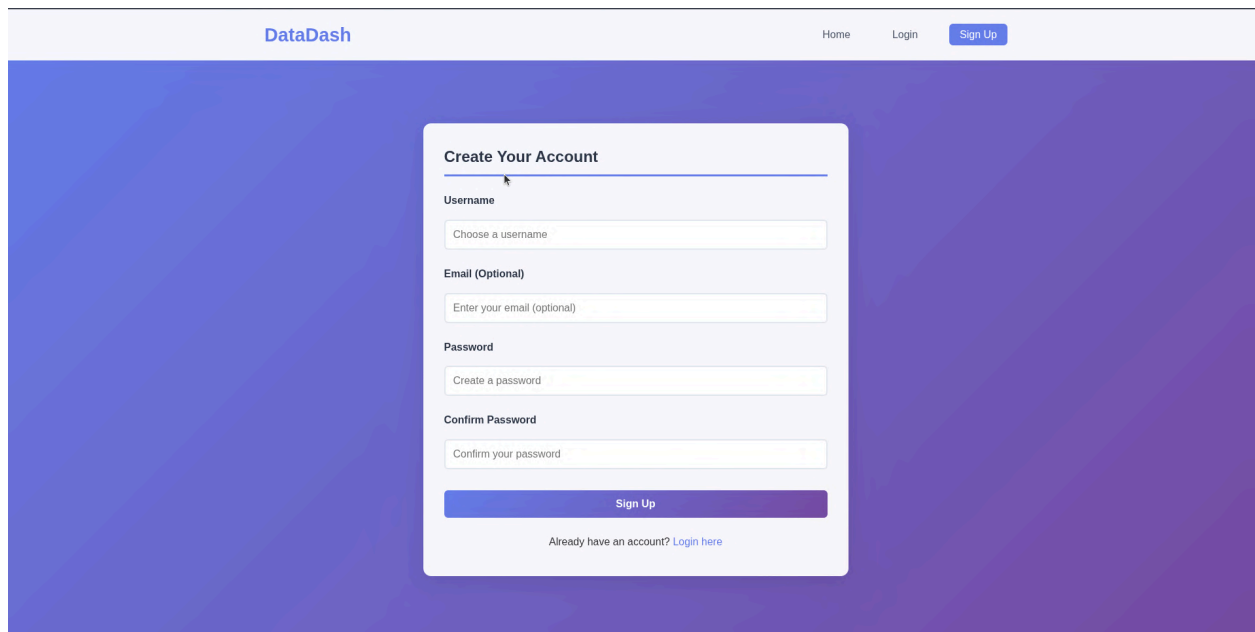


## 2. Login Page



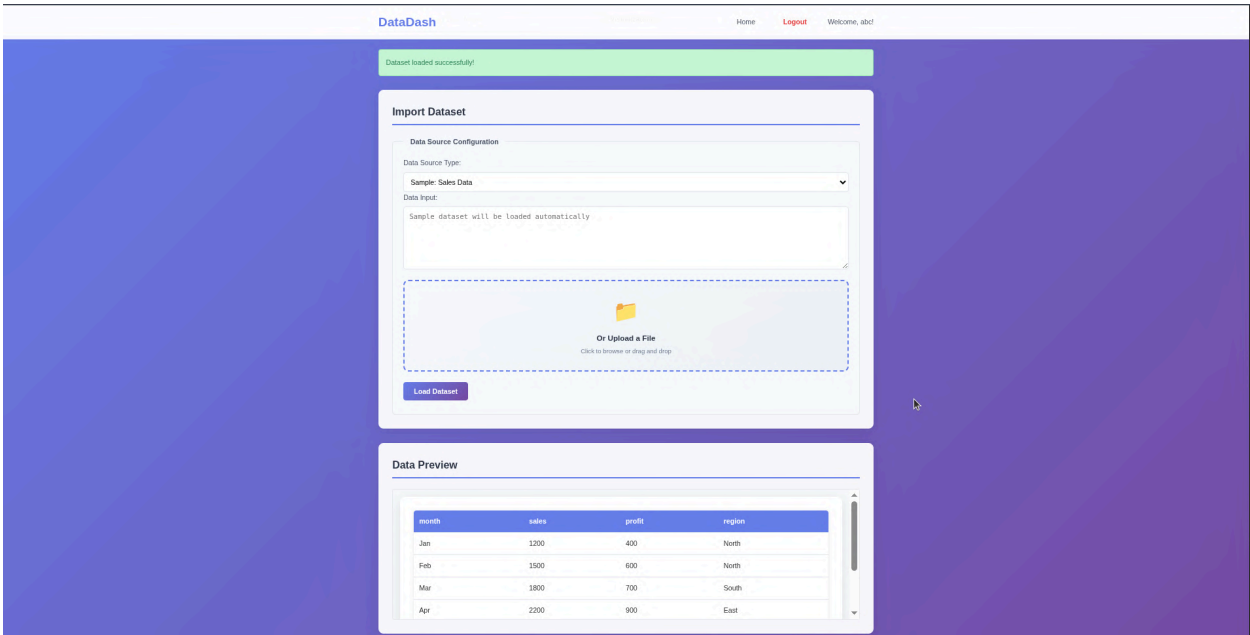
The login page features a purple gradient background. At the top, a light gray navigation bar contains the 'DataDash' logo on the left, and 'Home', 'Login' (highlighted in blue), and 'Sign Up' links on the right. Centered on the page is a white login card with the title 'Login to Your Account'. Inside the card, there are two input fields: 'Username or Email' with the placeholder 'Enter your username or email' and 'Password' with the placeholder 'Enter your password'. Below these fields is a blue 'Login' button. At the bottom of the card, a link reads 'Don't have an account? [Sign up here](#)'.

## 3. Signup Page

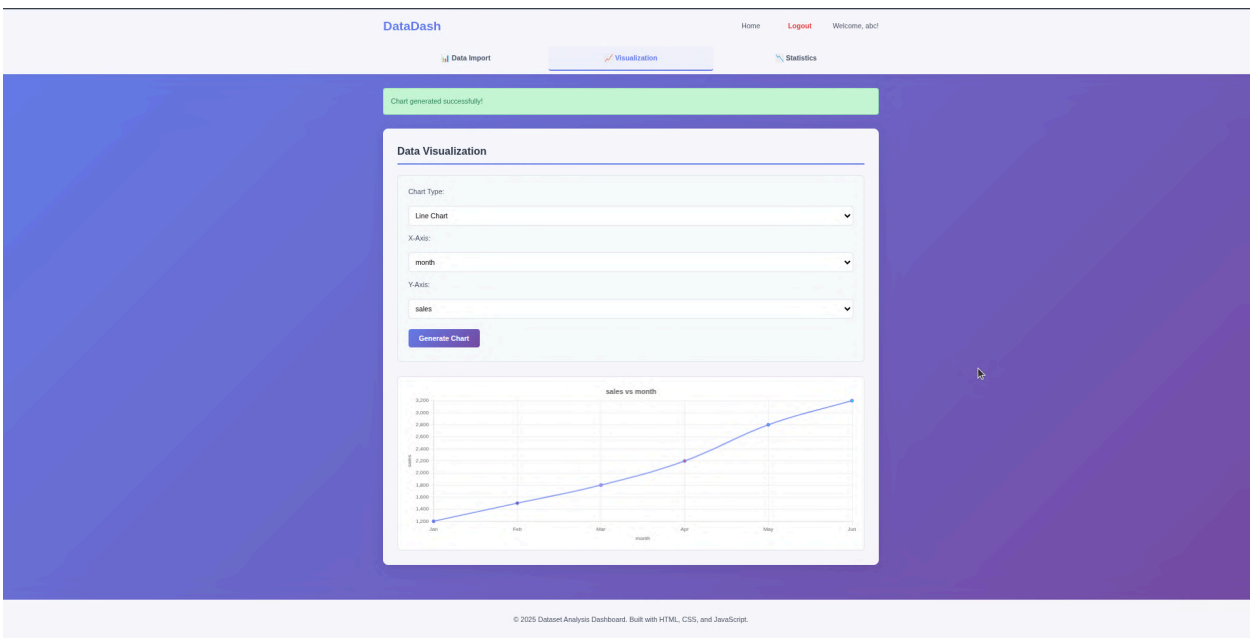


The signup page features a purple gradient background. At the top, a light gray navigation bar contains the 'DataDash' logo on the left, and 'Home', 'Login', and 'Sign Up' (highlighted in blue) links on the right. Centered on the page is a white signup card with the title 'Create Your Account'. Inside the card, there are four input fields: 'Username' with the placeholder 'Choose a username', 'Email (Optional)' with the placeholder 'Enter your email (optional)', 'Password' with the placeholder 'Create a password', and 'Confirm Password' with the placeholder 'Confirm your password'. Below these fields is a blue 'Sign Up' button. At the bottom of the card, a link reads 'Already have an account? [Login here](#)'.

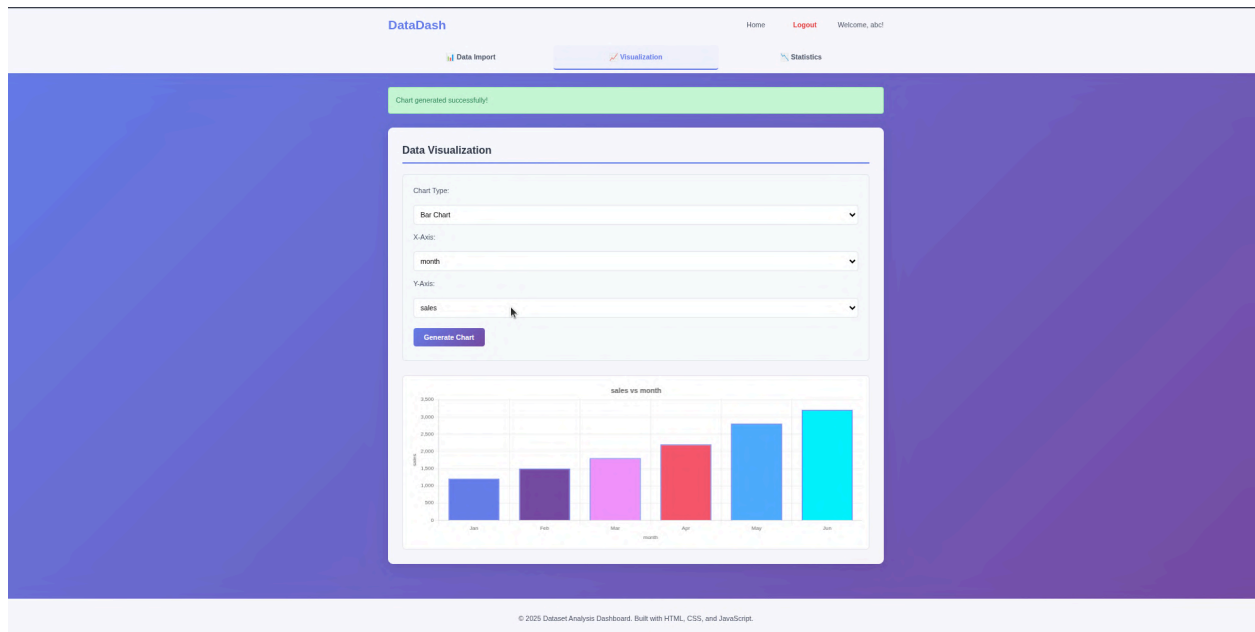
4. User Dashboard



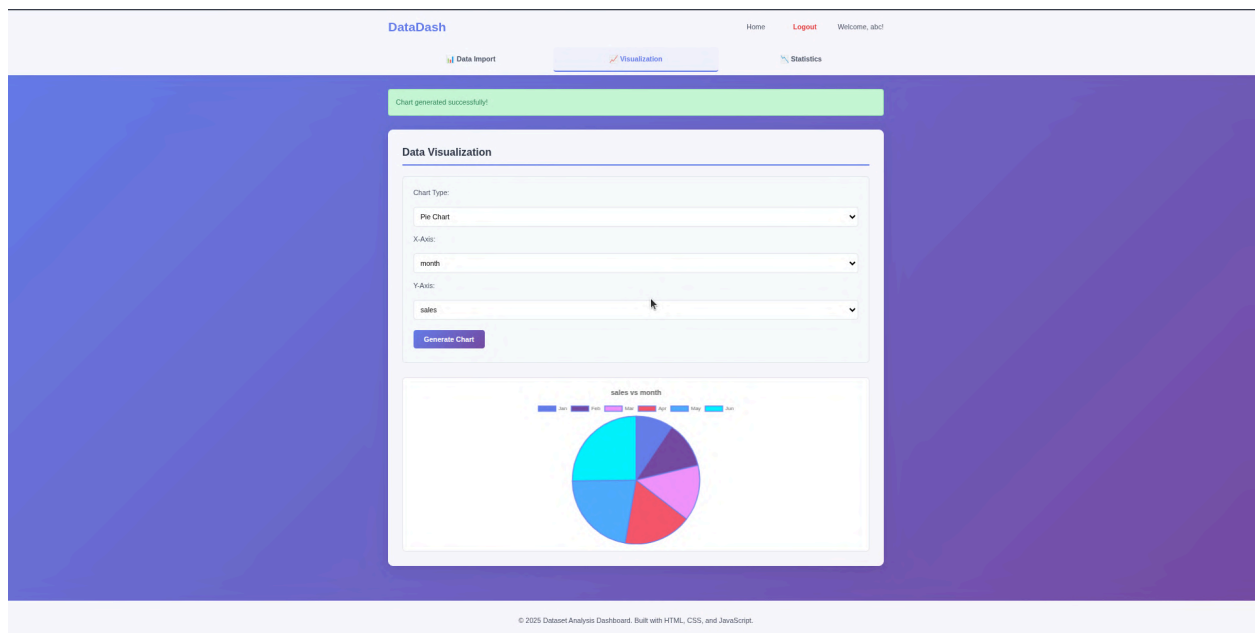
5. Visualization Page  
i. Line Chart



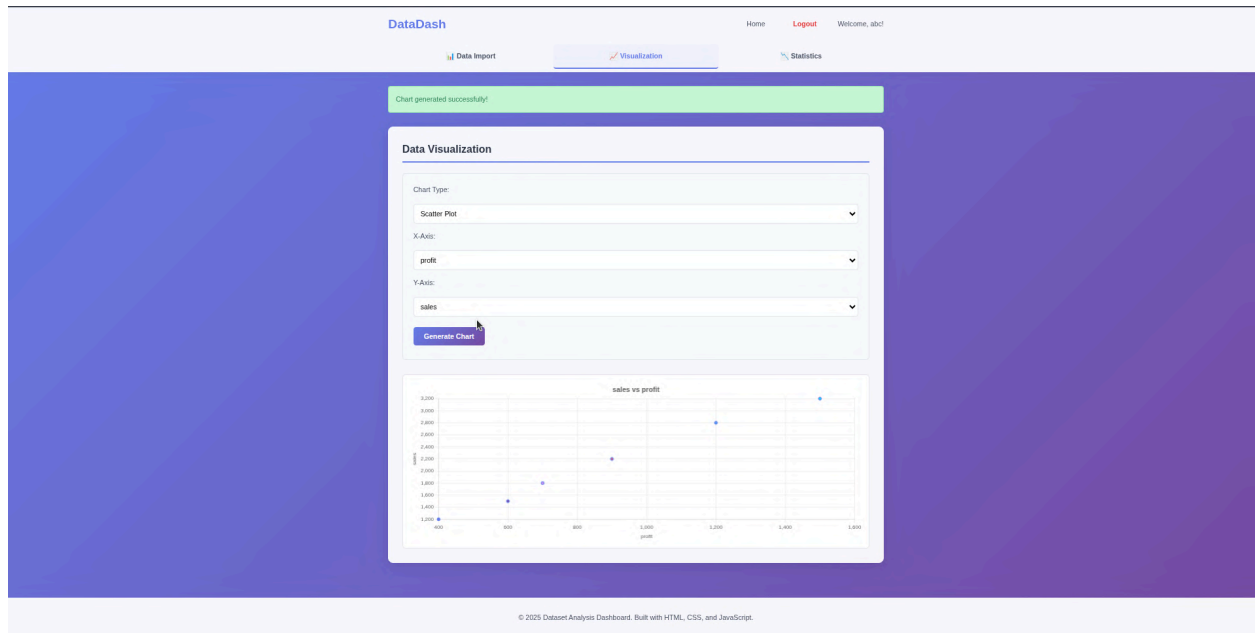
## ii. Bar Chart



## iii. Pie Chart

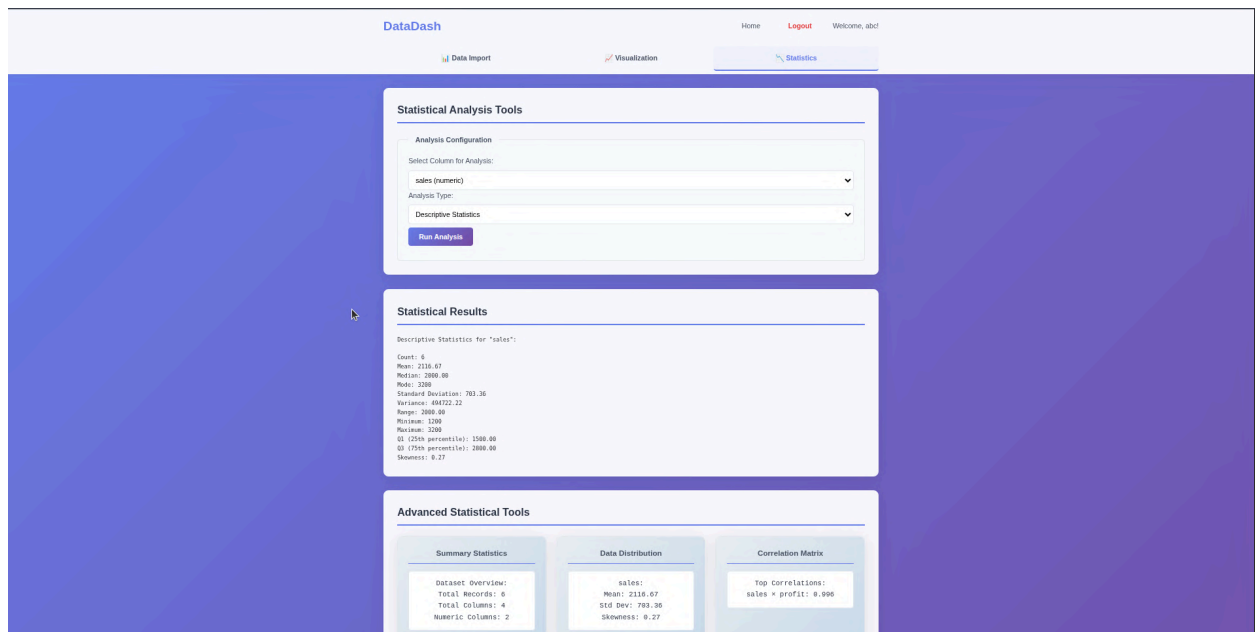


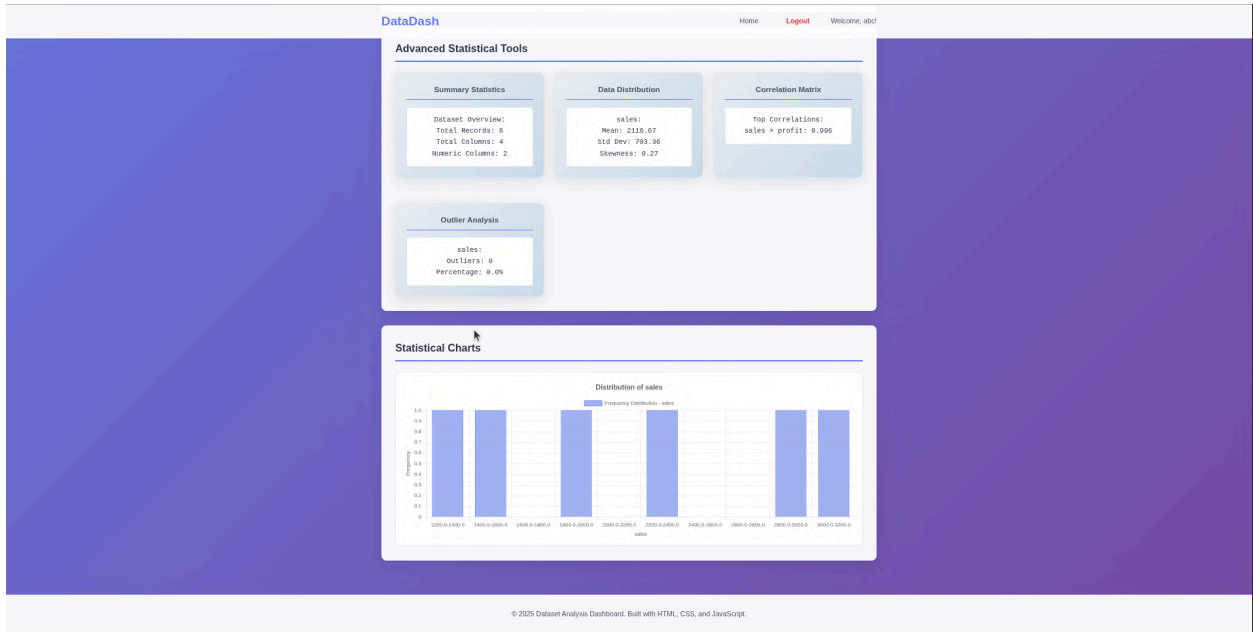
## iv. Scatter Plot



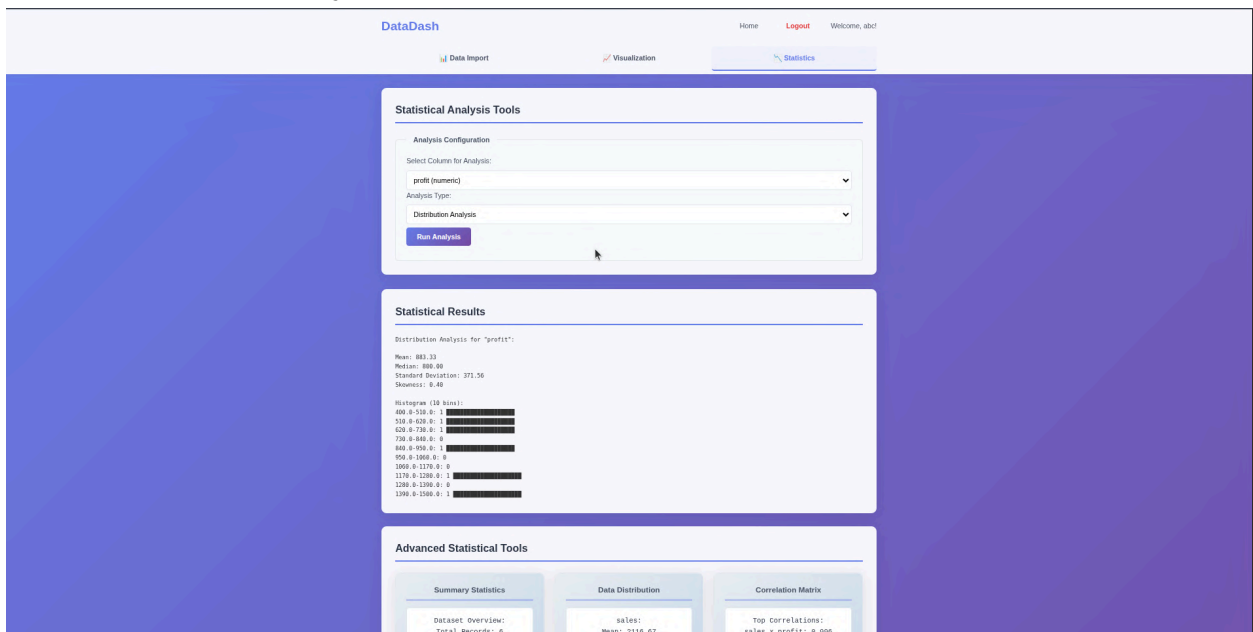
## 6. Statistics Page

### i. Descriptive Statistics

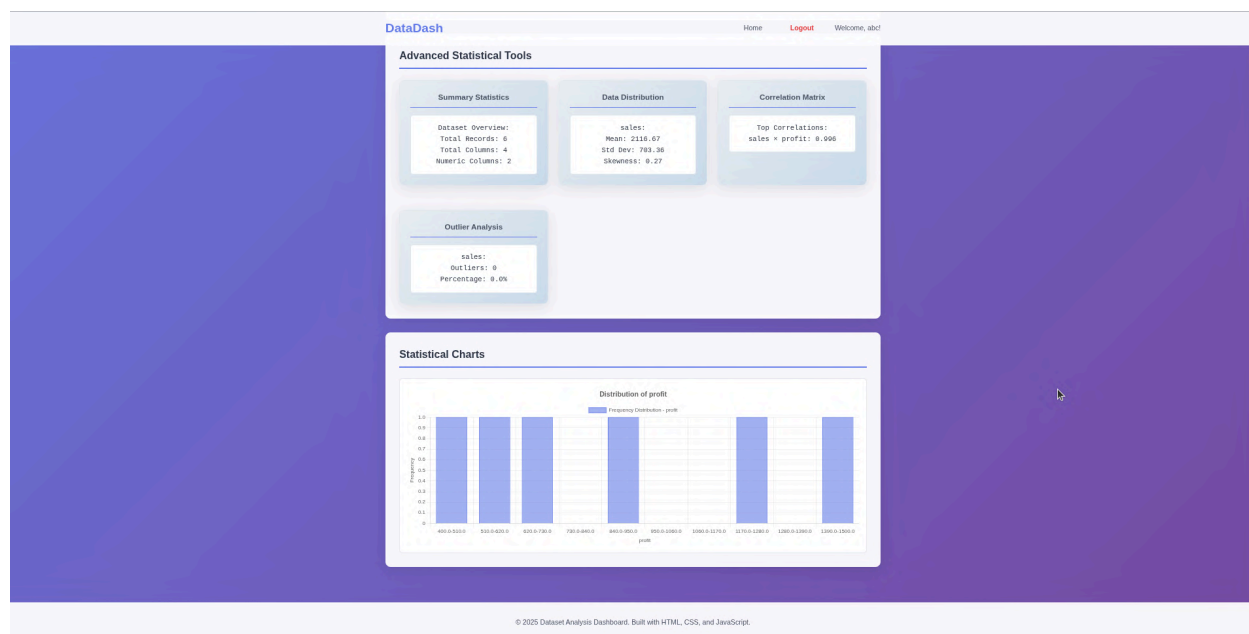




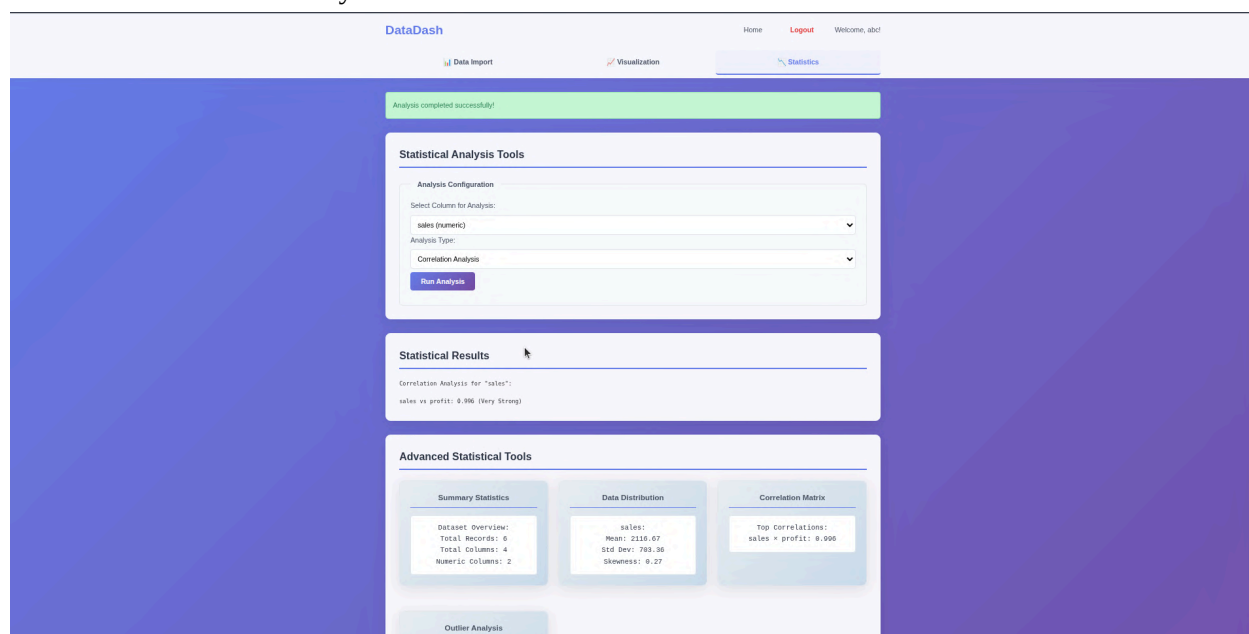
## ii. Distributive Analytics

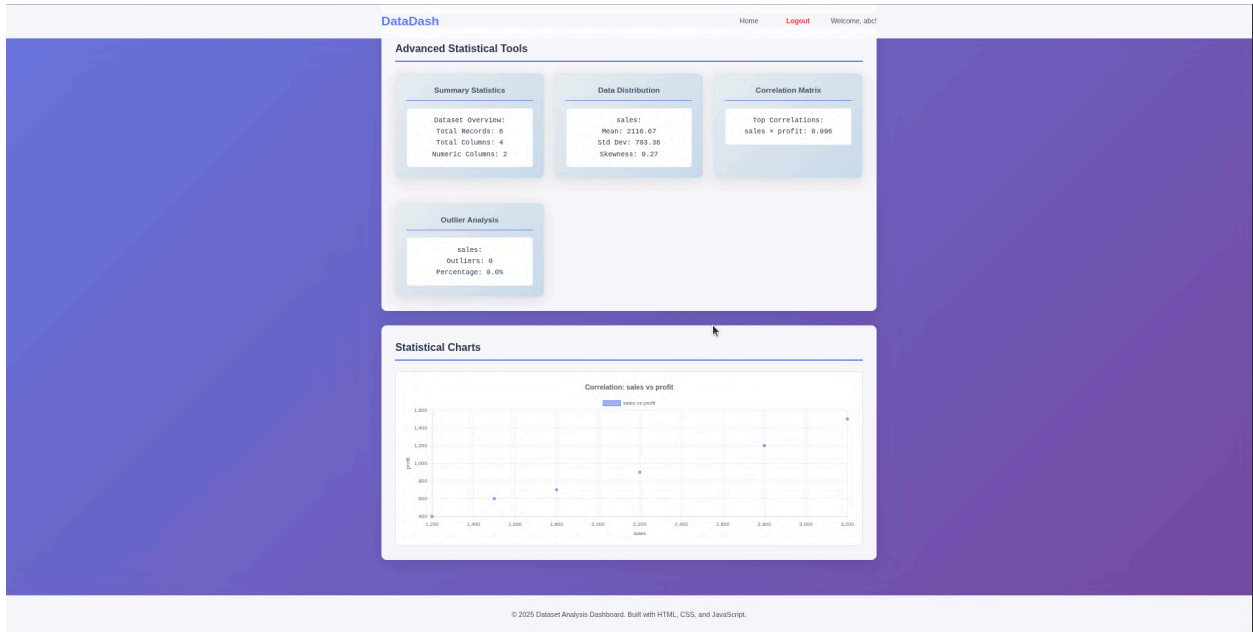




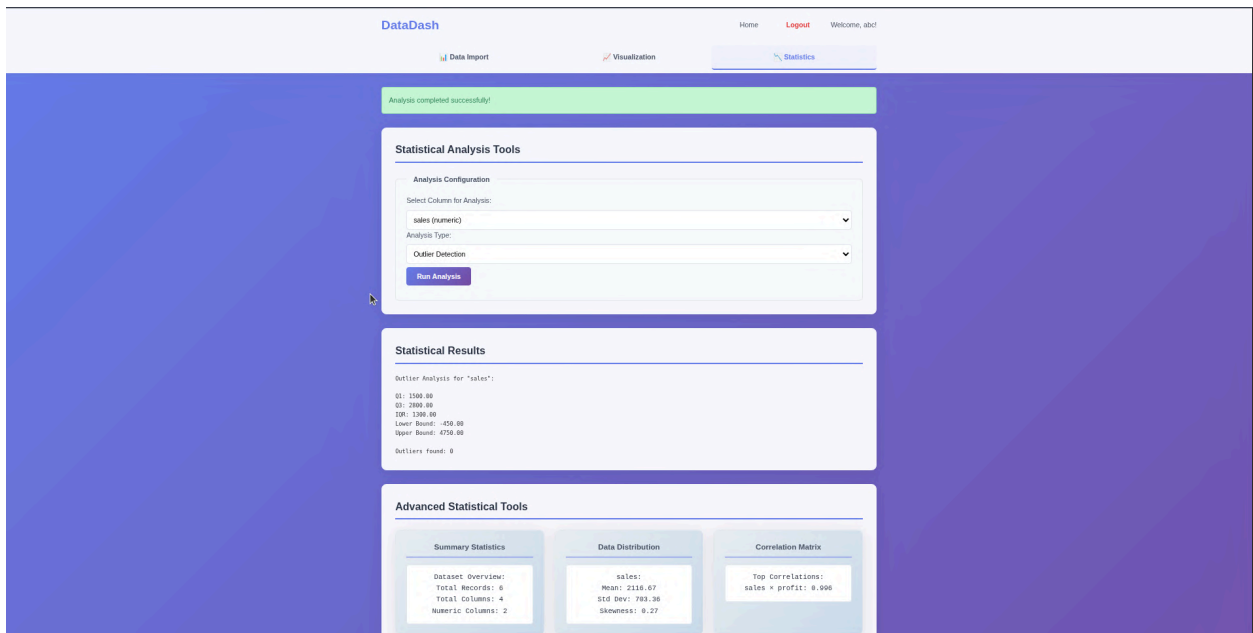


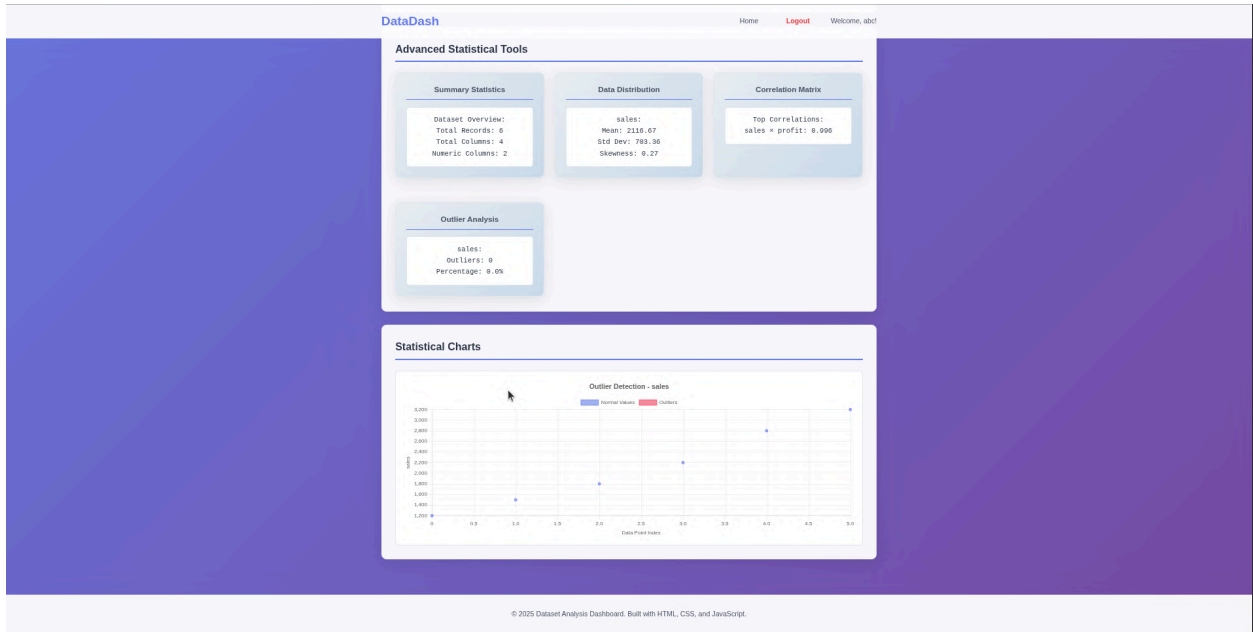
### iii. Correlation Analysis





## iv. Outlier Detection





## 7. Mongo DB Atlas Deployment

The MongoDB Atlas Data Explorer interface shows the 'users' collection. The left sidebar displays the 'CLUSTERS' list with 'Cluster0' selected. The main area shows the 'Documents' tab with a list of user documents. The documents are displayed in a JSON format, showing fields like '\_id', 'id', 'username', 'email', 'passwordHash', 'createdAt', and 'updatedAt'. The interface includes a search bar, a query editor, and a 'Visualize Your Data' button. The bottom status bar shows 'System Status: All Good' and '©2025 MongoDB, Inc. Status Terms Privacy Atlas Blog Contact Sales'.