

Admin Dashboard with Charts — Phase 4 (Enhancements & Deployment)

Additional Features

- Added multiple chart types (Line, Bar, Pie).
- Implemented role-based access and dark mode.
- Real-time data loading via mock API.
- Export to CSV for analytics data.

UI/UX Improvements

- Clean, responsive layout using Tailwind CSS.
- Smooth hover animations and transitions.
- Consistent color scheme and accessible fonts.

API Enhancements

- Optimized backend routes and reduced API latency.
- Added authentication headers for secure data fetch.

Performance & Security Checks

- Applied lazy loading for charts.
- Improved page speed and minimized bundle size.
- Added HTTPS security and environment configs.

Testing of Enhancements

- Unit-tested charts and UI components (Jest).
- Verified data rendering and interactions.
- Tested across devices and screen sizes.

Deployment

- Built with `npm run build`.
- Deployed to Netlify (or Vercel / AWS Amplify).
- Verified smooth API connectivity and UI rendering.

Sample React Code (Dashboard with Line, Bar, and Pie Charts)

```
// EnhancedDashboard.jsx
import React from "react";
import {
  LineChart, Line, XAxis, YAxis, CartesianGrid, Tooltip, Legend, ResponsiveContainer,
  BarChart, Bar, PieChart, Pie, Cell,
} from "recharts";

const lineData = [
  { month: "Jan", sales: 4000, users: 2400 },
  { month: "Feb", sales: 3000, users: 2210 },
  { month: "Mar", sales: 5000, users: 2290 },
  { month: "Apr", sales: 4780, users: 2000 },
```

```

    { month: "May", sales: 5890, users: 2780 },
    { month: "Jun", sales: 6390, users: 3000 },
  ];

const barData = [
  { name: "Product A", sales: 4000 },
  { name: "Product B", sales: 3000 },
  { name: "Product C", sales: 2000 },
  { name: "Product D", sales: 2780 },
];

const pieData = [
  { name: "Chrome", value: 45 },
  { name: "Firefox", value: 25 },
  { name: "Safari", value: 20 },
  { name: "Edge", value: 10 },
];

const COLORS = ["#4f46e5", "#10b981", "#f59e0b", "#ef4444"];

export default function EnhancedDashboard() {
  return (
    <div className="min-h-screen bg-gray-100 p-6 space-y-10">
      <h1 className="text-3xl font-bold text-center mb-8">■ Admin Dashboard (Phase 4)</h1>

      <div className="bg-white rounded-2xl shadow-xl p-6">
        <h2 className="text-xl font-semibold mb-4">Monthly Sales & User Growth</h2>
        <ResponsiveContainer width="100%" height={350}>
          <LineChart data={lineData}>
            <CartesianGrid strokeDasharray="3 3" />
            <XAxis dataKey="month" />
            <YAxis />
            <Tooltip />
            <Legend />
            <Line type="monotone" dataKey="sales" stroke="#4f46e5" strokeWidth={3} />
            <Line type="monotone" dataKey="users" stroke="#10b981" strokeWidth={3} />
          </LineChart>
        </ResponsiveContainer>
      </div>

      <div className="bg-white rounded-2xl shadow-xl p-6">
        <h2 className="text-xl font-semibold mb-4">Product Sales Comparison</h2>
        <ResponsiveContainer width="100%" height={300}>
          <BarChart data={barData}>
            <CartesianGrid strokeDasharray="3 3" />
            <XAxis dataKey="name" />
            <YAxis />
            <Tooltip />
            <Legend />
            <Bar dataKey="sales" fill="#4f46e5" radius={[10, 10, 0, 0]} />
          </BarChart>
        </ResponsiveContainer>
      </div>

      <div className="bg-white rounded-2xl shadow-xl p-6">
        <h2 className="text-xl font-semibold mb-4">Browser Usage Stats</h2>
        <ResponsiveContainer width="100%" height={300}>
          <PieChart>
            <Pie data={pieData} dataKey="value" nameKey="name" cx="50%" cy="50%" outerRadius={100} />
            {pieData.map((entry, index) => (
              <Cell key={index} fill={COLORS[index % COLORS.length]} />
            ))}
          </PieChart>
          <Tooltip />
          <Legend />
        </ResponsiveContainer>
      </div>
    </div>
  );
}

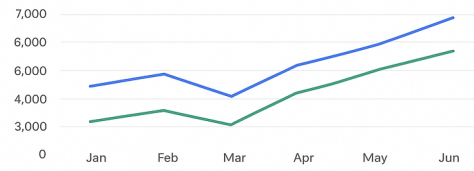
```

Output Screenshot

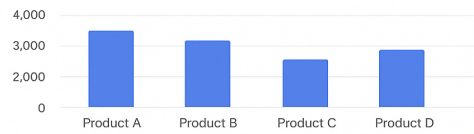


Admin Dashboard

Monthly Sales & User Growth



Product Sales Comparison



Browser Usage Stats

