Expense Tracker App with Prediction

1. Overview:

The Expense Tracker App is a web-based application that allows users to log and track their daily expenses.

It helps users manage their spending by providing insights into past expenses and predicting future expenses using

machine learning. The app offers personalized budget recommendations based on predicted future expenses, helping users

make informed financial decisions.

2. Features:

- Expense Logging: Users can input expenses by category, amount, and date, and view them in a sortable table.

- Expense List: Displays all logged expenses, with options to delete individual entries.

- Machine Learning Predictions: The app uses TensorFlow.js to predict expenses for the next 30 days, based on historical spending patterns.

- Color-Coded Predictions: Predictions are presented as cards that are color-coded to signify low, medium, or high predicted expenses.

- Responsive Design: The app is optimized for both desktop and mobile users.

3. Real-Life Applications:

This app can be beneficial in various real-life scenarios, including:

- Personal Budget Management: Individuals can use the app to track personal expenses, predict future spending,

and avoid overspending.

- Small Business Expense Tracking: Entrepreneurs and small business owners can use the app to

monitor and manage

operational expenses.

- Event Planning: Event planners can track and predict the costs of various event-related expenses, helping them

manage budgets more effectively.

- Students and Young Professionals: Students or young professionals with limited income can use the app to manage

monthly spending.

- Family Budgeting: Families can use the app to log household expenses, predict future costs, and manage their budget.

4. Technologies Used:

- HTML5/CSS3: For structuring and styling the web application.

- JavaScript (ES6): For handling user interactions and managing expense data.

- TensorFlow.js: Implements the linear regression model for predicting future expenses.

- Flexbox: Used for responsive layout and grid design.

- Optional: Chart.js for visualizing expenses as charts (if integrated).

5. Future Enhancements:

- Data Export/Import: Add features to export and import expense data as CSV or JSON files.

- Advanced Prediction Models: Integrate more complex machine learning models for better accuracy.

- Visual Analytics: Add charts to provide graphical insights into past expenses.