ML March Website

A comprehensive website for the ML March event at IIEST Shibpur, featuring user authentication, profile management, session tracking, and resources for machine learning enthusiasts.

Features

- **User Authentication**: Secure Google-based authentication
- **User Profiles**: Encrypted storage of user profile information
- **Dashboard**: Personalized dashboard for enrolled participants
- **Session Management**: Track upcoming and completed sessions
- **Resource Library**: Machine learning resources and materials
- **Responsive Design**: Works on all devices from mobile to desktop

Technology Stack

- **Frontend**:
  - HTML5, CSS3, JavaScript (ES6+)
  - Modular JavaScript architecture
  - Responsive design with custom CSS
- **Backend**:
  - Node.js with Express
  - SQLite database for data persistence
  - Firebase Authentication for user login
- **Security**:
  - Encryption for sensitive data (AES-256-CBC)
  - CSRF protection
  - Input validation and sanitization
  - Secure password hashing with bcrypt

Project Structure

```
ml-march/
├── index.html              # Main HTML file
├── package.json            # Node.js dependencies
├── .env                    # Environment variables (created during setup)
├── css/                    # CSS styles
│   ├── style.css           # Main CSS styles
│   ├── dashboard.css       # Dashboard-specific styles
│   └── responsive.css      # Responsive design styles
├── js/                     # Client-side JavaScript
│   ├── main.js             # Core application initialization
```

```
│   ├── auth.js             # Authentication functions
│   ├── firebase-config.js  # Firebase configuration
│   ├── ui.js               # UI update functions
│   ├── events.js           # Event handlers
│   └── animations.js       # Animations and visual effects
├── server/                 # Server-side code
│   ├── server.js           # Express server
│   └── database/           # Database setup and migrations
│       ├── setup.js        # Database initialization
│       └── mlmarch.db      # SQLite database (created during setup)
└── assets/
    └── images/             # Image directory
```

Setup Instructions

Prerequisites

- Node.js (v14 or higher)
- npm (v6 or higher)

Installation

1. Clone the repository:

```
git clone https://github.com/yourusername/ml-march.git
cd ml-march
```

2. Install dependencies:

```
npm install
```

3. Initialize the database:

```
npm run setup-db
```

4. Create a Firebase project and update the configuration in `js/firebase-config.js`

5. Start the server:

```
npm start
```

6. Visit `http://localhost:3000` in your browser

Security Implementation

The application implements several security measures:

1. **Data Encryption**: Sensitive user data (like phone numbers) are encrypted using AES-256-CBC encryption before being stored in the database. Each user's data is encrypted with a unique salt for added security.
2. **Hashing**: Firebase handles password hashing for authentication, while the server encrypts sensitive profile information.
3. **Environmental Security**: Encryption keys are stored in environment variables, not in the code.
4. **Input Validation**: All user inputs are validated both on the client and server side before processing.
5. **CSRF Protection**: Implemented through proper token validation for state-changing operations.
6. **Content Security**: Strict content security policies to prevent XSS attacks.

License

Authors

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Acknowledgments

- Google Developer Students Club (GDSC) @IIEST
- CodeIIEST - The Official Coding Club of IIEST Shibpur