

# Interactive Tutorials Application

## Frontend

- React 18.2.0
- React Router DOM 6.22.1
- TailwindCSS 3.3.3
- Vite 6.2.6
- Axios 1.5.0
- Classnames 2.3.2

## Backend

- Node.js 18
- Express.js
- Sequelize ORM
- SQLite Database

## Development Tools

- Docker & Docker Compose
- Nginx (for production deployment)
- Vite (for development server)

## Project Structure

```
├── frontend/           # React frontend application
│   ├── src/           # Source files
│   │   ├── components/ # React components
│   │   ├── services/   # API services
│   │   └── App.jsx      # Main application component
│   ├── public/         # Static files
│   └── Dockerfile       # Frontend Docker configuration
├── backend/           # Node.js backend application
│   ├── models/         # Database models
│   ├── routes/         # API routes
│   ├── config/         # Configuration files
│   └── Dockerfile       # Backend Docker configuration
└── docker-compose.yml  # Docker Compose configuration
```

## **Features**

- Create and manage interactive tutorials
- Support for video content
- Step-by-step tutorials
- Quiz functionality
- Module-based learning structure
- Responsive design
- Real-time updates

## **Getting Started**

1. Clone the repository
2. Run `docker-compose up` to start the application
3. Access the frontend at `http://localhost:5173`
4. The backend API will be available at `http://localhost:5000`

## **Development**

- Frontend development server runs on port 5173
- Backend API runs on port 5000
- Hot reloading enabled for frontend development
- SQLite database for data persistence

## **Production Deployment**

The application is containerized using Docker and can be deployed to any container orchestration platform that supports Docker Compose.