

Project Documentation

Project Title

- **Introduction**

- **Project Title:**Insight Stream

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- **Project Overview**

- **Purpose:** insight stream is a data-driven analytics platform that helps organization capture process,and visulaize insights from multiple data sources in real- time. it simplifies complex data handling.enabling smater decision-making through interactive dashbords and reports.

- **Features:**

Real-time data collection and integration

Customizable dashboards and visualizations

Advanced analytics and reporting

User authentication and access control

Responsive and intuitive user interface

- **Architecture**

Frontend: React.js, TailwindCSS, Material UI

Backend: Node.js, Express.js (REST APIs)

Database: MongoDB (stores user profiles, datasets, reports, insights)

- **Setup Instructions**

Prerequisites:

Node.js

MongoDB

Installations:

Git

MongoDB Compass / VS Code

Clone the repository git clone

Install client dependencies cd

client npm install

Install server dependencies cd

../server npm install

- **Folder Structure**

```
SB-Works/  
|-- client/           # React frontend  
    |  
    components  
    / L_pages/  
|-- server/           # Node.js backend  
    |-- routes/  
        |-- models/  
            |-- controllers/
```

- **Running the Application**

Frontend:

npm start

Backend:

npm run dev

API Documentation:

Manual testing using Postman

Tools: Postman, Chrome DevTools

- **Access:** Visit <http://localhost:3000>
- **API Documentation**

User:

POST /api/user/register

POST /api/user/login

Data Stream:

POST /api/data/upload

GET /api/data/view

Insights:

GET /api/insights/report

GET /api/insights/dashboard

- **Authentication**

JWT-based secure login system

Role-based access control for different user levels

Middleware for route protection

- **User Interface**

Pages:

Login/Register

Dashboard (real-time insights)

Data Upload Page

Reports & Analytics Page

Profile & Settings

- **Known Issues**

Performance may degrade with very large datasets

Limited offline support

- **Future Enhancements**

Integration with third-party APIs (Google Analytics, Salesforce, etc.)

Machine Learning-based predictive insights

Push notifications for critical updates

Export options (PDF, Excel, CSV)