**Project Documentation**

Project Title

* **Introduction**
* **Project Title:Insight Stream**
* **Team ID:NM2025TMID34820**
* **Team Leader:** VANITHA.S & 24ucs565@avasctnj.edu.in
* **Team Members:**
* PREETHI.M & 24ucs541@avasctnj.edu.in
* PREETHI.S & 24ucs542@avasctnj.edu.in
* PRIYADHARSHINI.K & 24ucs543@avasctnj.edu.in
* VINNOLIA.D & 24ucs567@avasctnj.edu.in
* **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](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)**