**Technical Documentation:**

**TEAM : WEB WEAVERS**

**PROBLEM STATEMENT : ON-001**

**ReportNRepair Project Tools and Technologies**

**1. Frontend Technologies**

* **React (v19.0.0)**
  + **Main JavaScript library for building the user interface**
  + **Uses modern React features including hooks and context**
* **Vite (v6.3.1)**
  + **Build tool and development server**
  + **Provides fast Hot Module Replacement (HMR)**
* **CSS Frameworks**
  + **TailwindCSS (v4.1.4): Utility-first CSS framework**
  + **DaisyUI (v5.0.27): Component library for TailwindCSS**
* **Routing**
  + **React Router DOM (v7.5.1): For client-side routing**
* **UI Components**
  + **React Icons (v5.5.0): Icon library**

**2. Backend Technologies**

* **Python Flask Backend**
  + **Flask: Web framework for Python**
  + **Flask-CORS: Handle Cross-Origin Resource Sharing**
* **Database**
  + **PostgreSQL (v17.4): Relational database**
  + **psycopg2: PostgreSQL adapter for Python**

**3. AI/ML Integration**

* **Ollama: Local LLM integration**
* **Hugging Face Transformers: For AI model implementation**
* **TensorFlow/Keras: For machine learning capabilities**

**4. Development Tools**

* **Version Control**
  + **Git: Source code management**
  + **GitHub: Code hosting and collaboration**
* **Code Quality**
  + **ESLint (v9.22.0): JavaScript linting**
  + **ESLint plugins for React**
* **IDE/Editor**
  + **Visual Studio Code**

**5. Project Structure**

**WebWeavers/**

**├── frontend/           # React frontend application**

**├── backend/           # Python Flask backend**

**│   ├── routes/       # API endpoints**

**│   ├── models/       # Data models**

**│   ├── database/     # Database configuration**

**│   └── utils/        # Utility functions**

**└── requirements.txt  # Python dependencies**

**6. Dependencies and Requirements**

**Frontend Dependencies**

* **Core: React, React DOM**
* **Routing: React Router DOM**
* **Styling: TailwindCSS, DaisyUI**
* **Development: Vite, ESLint**

**Backend Requirements**

* **Flask and Flask-CORS**
* **PostgreSQL database connector**
* **Machine Learning libraries (TensorFlow, Transformers)**
* **Ollama for LLM integration**

**7. Installation Tools**

* **Custom batch script (install\_tools.bat) for:**
  + **PostgreSQL 17.4 installation**
  + **Ollama setup**
  + **Development environment configuration**