Global-IPI-Platform – Project Documentation

(Milestone 1)

Student: Anjali Varshney

Role: Frontend Developer

Project: Global-IPI-Platform – A platform to monitor global intellectual property activity.

1. Introduction

The Global-IPI-Platform is a full-stack web application developed to help innovators, law firms, and R&D teams track and monitor global intellectual property filings. This document describes my frontend contributions: setting up the React application, designing UI mockups, and implementing responsive Landing, Login and Register pages.

2. Project Overview

2.1 Objectives

- Build responsive and user-friendly authentication pages.
- Set up and organize the frontend project structure.
- Implement UI components aligned with the project theme.

2.2 Frontend Tech Stack

React.js
React Router
HTML, CSS, Tailwind
JavaScript ES6
VS Code
Git & GitHub

3. Roles & Responsibilities

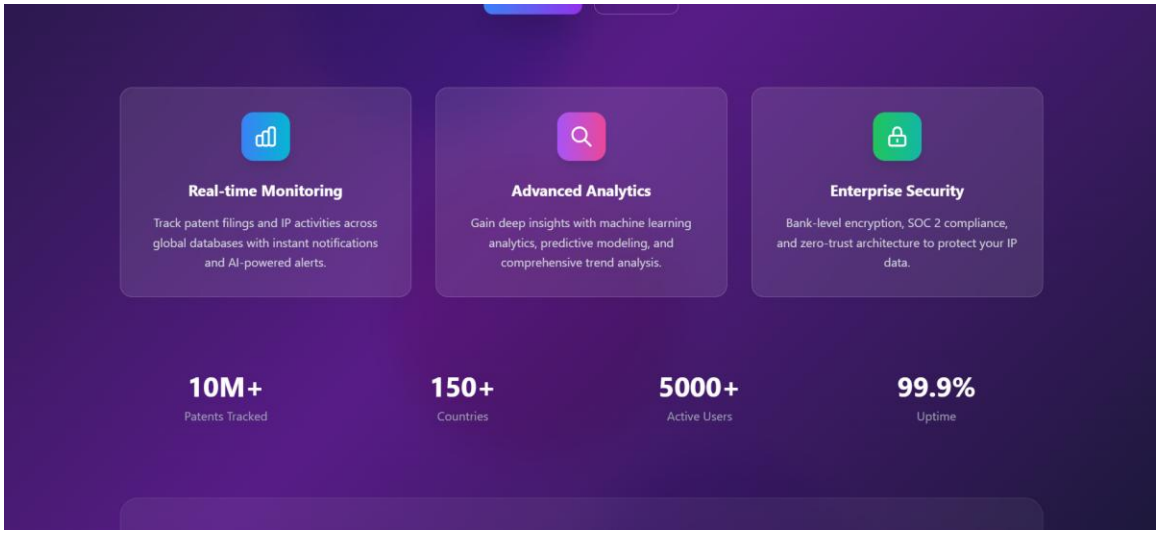
As the frontend developer, my tasks included setting up the React application, creating Login and Register mockups, and implementing them fully with responsive design.

3.1 React Frontend Setup

- Created project using CRA (Create React App)
- Organized folder structure: components, pages, assets, services
- Installed required dependencies such as React Router
- Configured routes for Landing, Login and Register pages

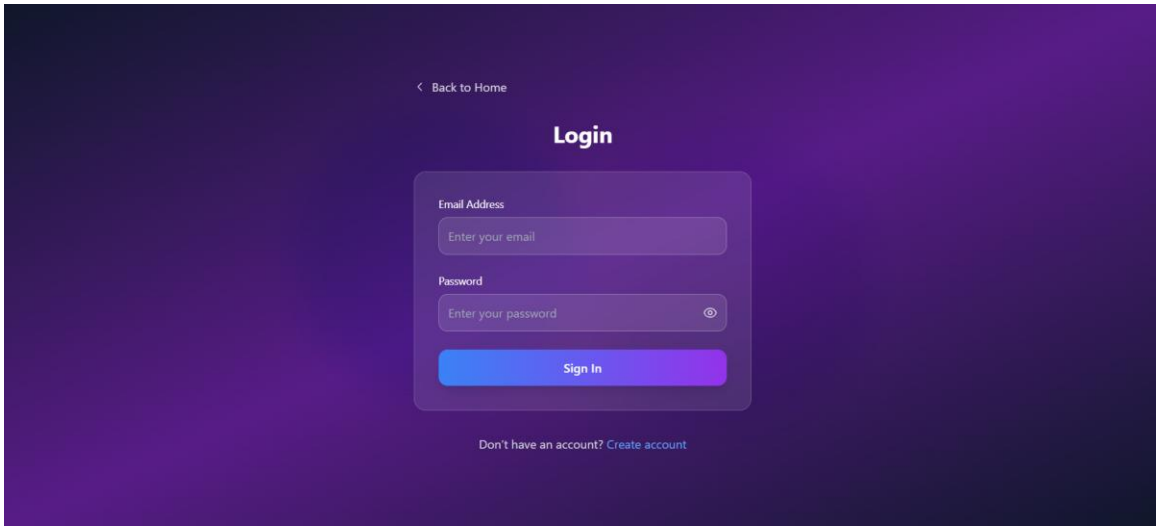
4. UI/UX Design Work (Mockups)

4.1 Landing Page Mockup



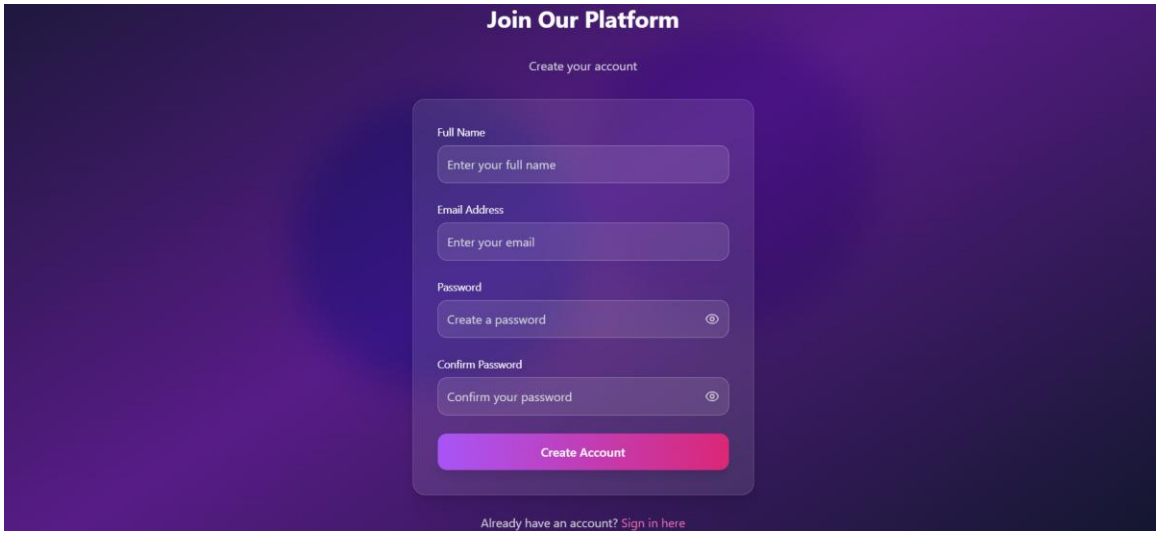
4.1 Login Page Mockup

Designed the login page layout, choosing color scheme, spacing, and fields.



4.2 Register Page Mockup

Designed a responsive registration form layout focusing on user clarity.



5. Actual Implementation

5.1 Login Page Implementation

Implemented a responsive login form with email/password fields, form validation, and error handling.

5.2 Register Page Implementation

Developed responsive register page with validation and user-friendly UI components.

6. Responsiveness Testing

Tested layouts on mobile, tablet, and desktop using Chrome to ensure consistent design.

7. Challenges & Solutions

Challenge	Solution
React setup errors	Resolved by reinstalling dependencies and using correct Node version.
Routing issues	Configured BrowserRouter and correct paths.
Form validation	Added regex and conditional rendering for errors.

8. Daily Work Log

Date	Task Completed
Dec 1	Setup React app and project structure.
Dec 2	Created landing page mockup.
Dec 3	Designed register page mockup.
Dec 4	Created login page mockup.
Dec 5	Developed landing page UI.
Dec 6	Implemented register page.
Dec 7 Dec 8-10	Made login page responsive. Testing and UI improvements.

"Beyond my designated responsibilities, I proactively handled additional work, including the complete design and development of the Landing Page. This contribution enhanced the overall visual consistency and user experience of the platform."

9. Conclusion

I successfully completed the frontend setup and implementation of the Landing, Login and Register pages. The UI is fully responsive and follows the project design goals. This work forms the core user authentication flow for the platform.

Milestone 2

Milestone Duration: 15 December – 26 December

1. Introduction

This document describes my contributions during Milestone 2 of the Global-IPI-Platform project. In this phase, the focus was on advanced search functionality, result visualization, map-based IP distribution, and dashboard UI/UX enhancements.

The goal of this milestone was to transform the platform from a basic authentication system into a feature-rich intellectual property intelligence dashboard.

2. Milestone 2 Objectives

- Design and implement a Search Form for patents and trademarks.
- Build a Search Results List Page with filtering, sorting, and pagination.
- Introduce a Map View to visualize geographic distribution of IP assets.

3. Technologies Used

Frontend Technologies

- React.js
- React Router
- JavaScript (ES6)
- Tailwind CSS
- Recharts (for charts & analytics)

External Services & APIs

- Google Maps JavaScript API – for geographic visualization
- Google Patents API (via API key generation) – planned backend integration
- Firebase (Firestore) – feedback & contact form storage

Tools

- VS Code
- Git & GitHub
- Chrome DevTools

4. Features Implemented

4.1 Search Form Page / Section

A comprehensive IP Search interface was designed and implemented to allow users to search Patents and Trademarks using multiple parameters.

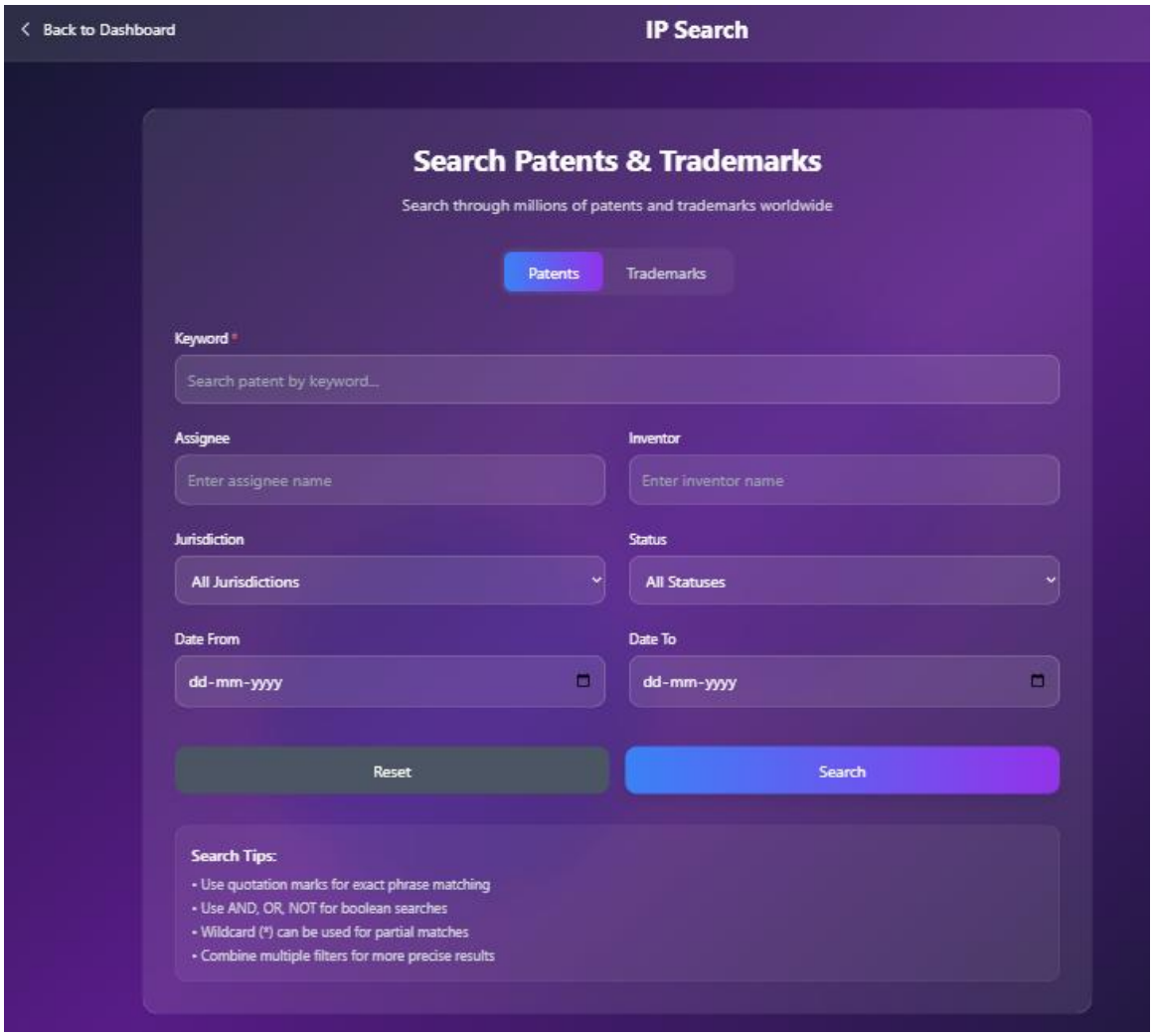
1. Search Parameters:

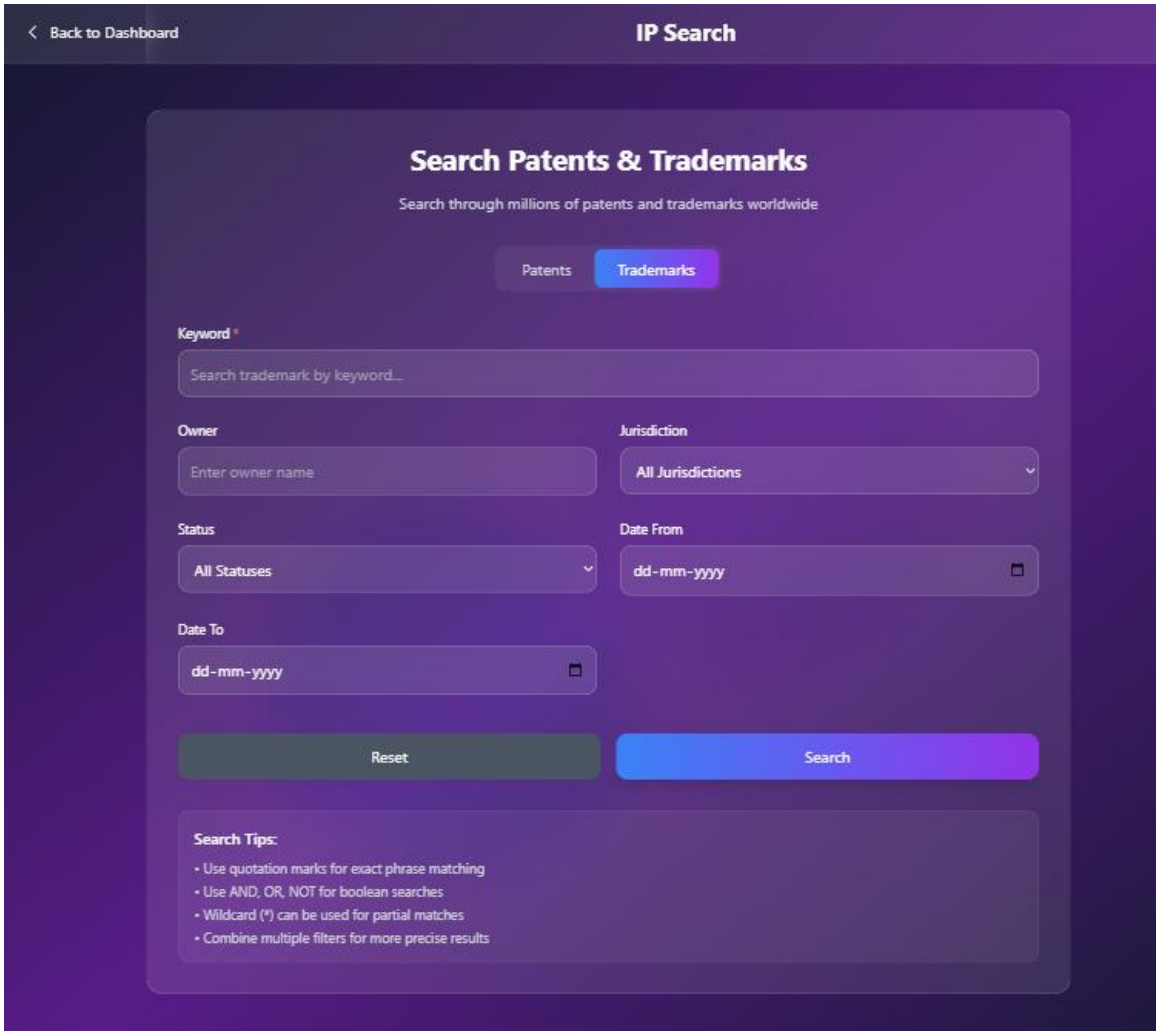
- Keyword
- Assignee
- Inventor
- Jurisdiction (Country/Region)
- Status (Active, Pending, etc.)

2. Key Highlights:

- Clean and intuitive UI
- Toggle between Patent and Trademark search
- Responsive layout for all devices
- Prepared for backend API integration

Screenshot: Search Form Page





4.2 Search Results List Page

A dedicated Search Results Page was developed to display fetched patents and trademarks in a structured format.

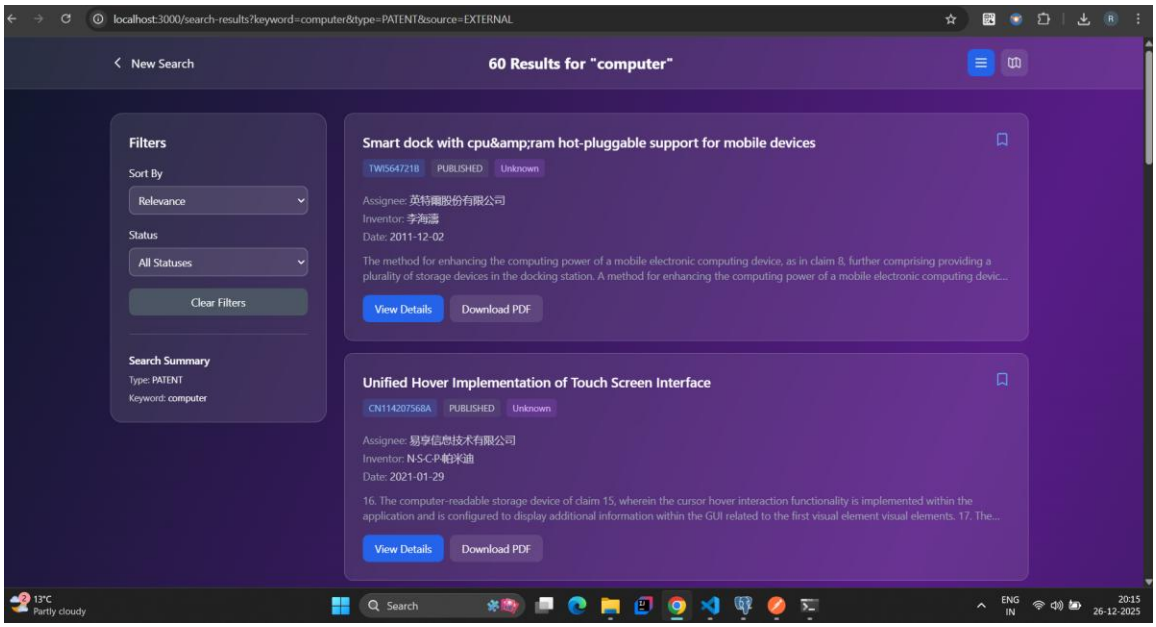
3. Implemented Functionalities:

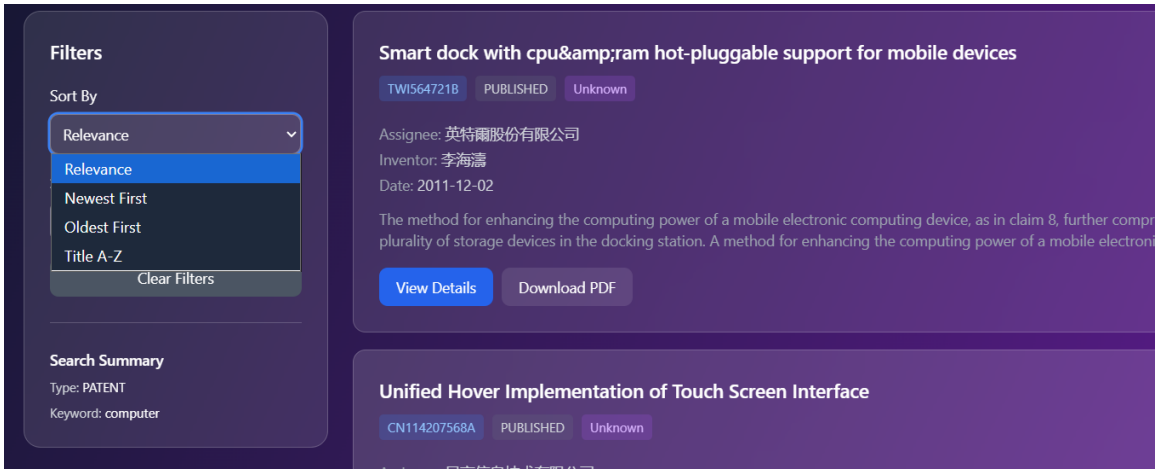
- Display results in card/list view
- Sort results by relevance and date
- Apply filters dynamically
- Pagination for large datasets
- Status badges (Active / Pending)

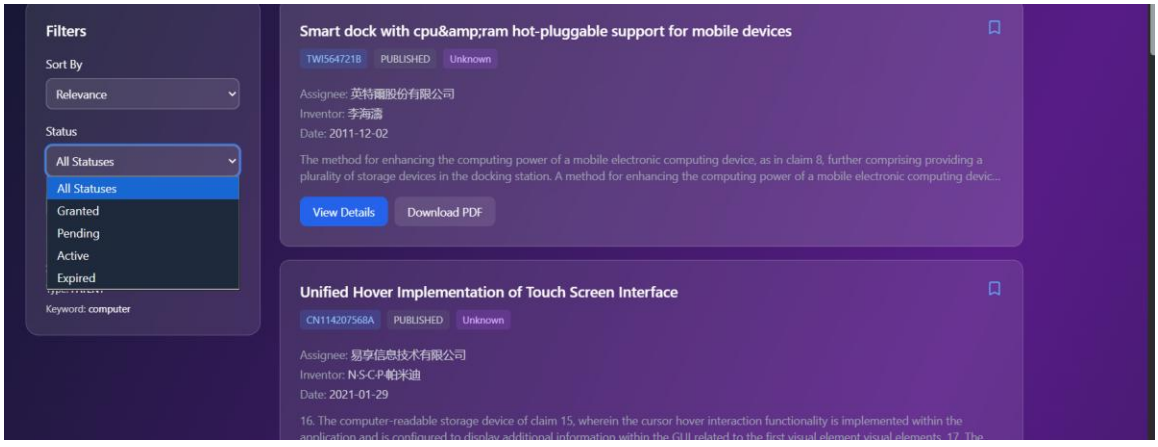
4. Map View Integration:

- The List Page is linked with the Map View
- Selecting a region on the map highlights relevant IP assets
- Both list view and map view respond to the same filters

Screenshot: Search Results







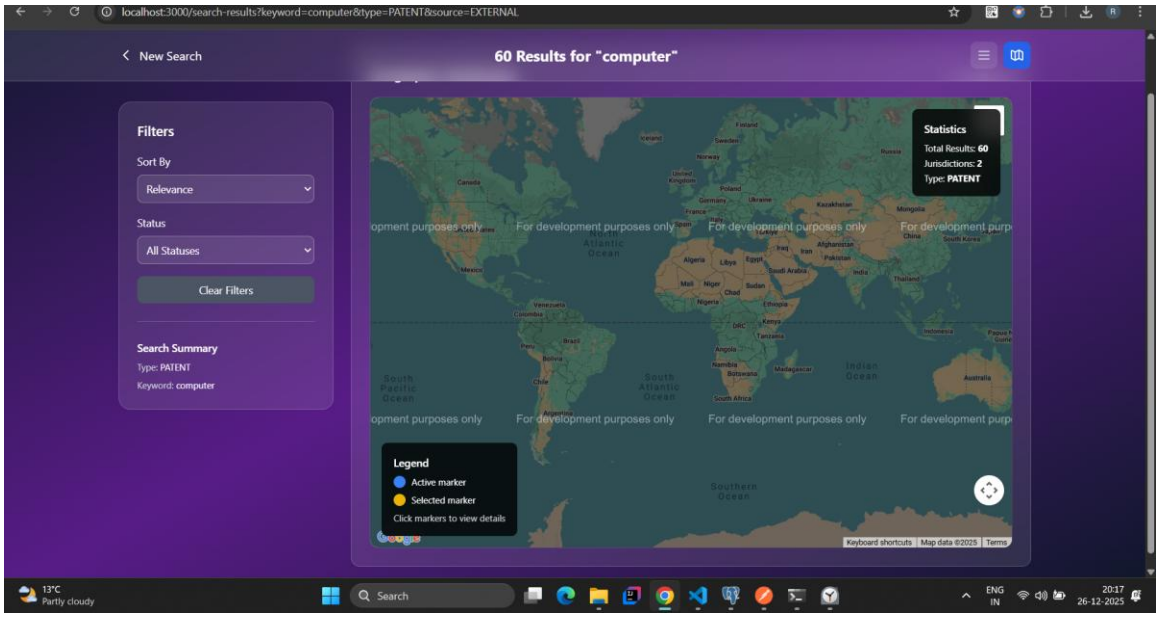
4.3 Geographic Map View (Google Maps Integration)

To enhance data visualization, a Global Map View was integrated using the Google Maps JavaScript API.

5. Map Features:

- World-level map view
- Region-wise IP distribution markers
- Marker count shows number of patents/trademarks in a region
- Clickable markers with information popups
- Side list synchronized with selected region

Screenshot: Global IP Map View



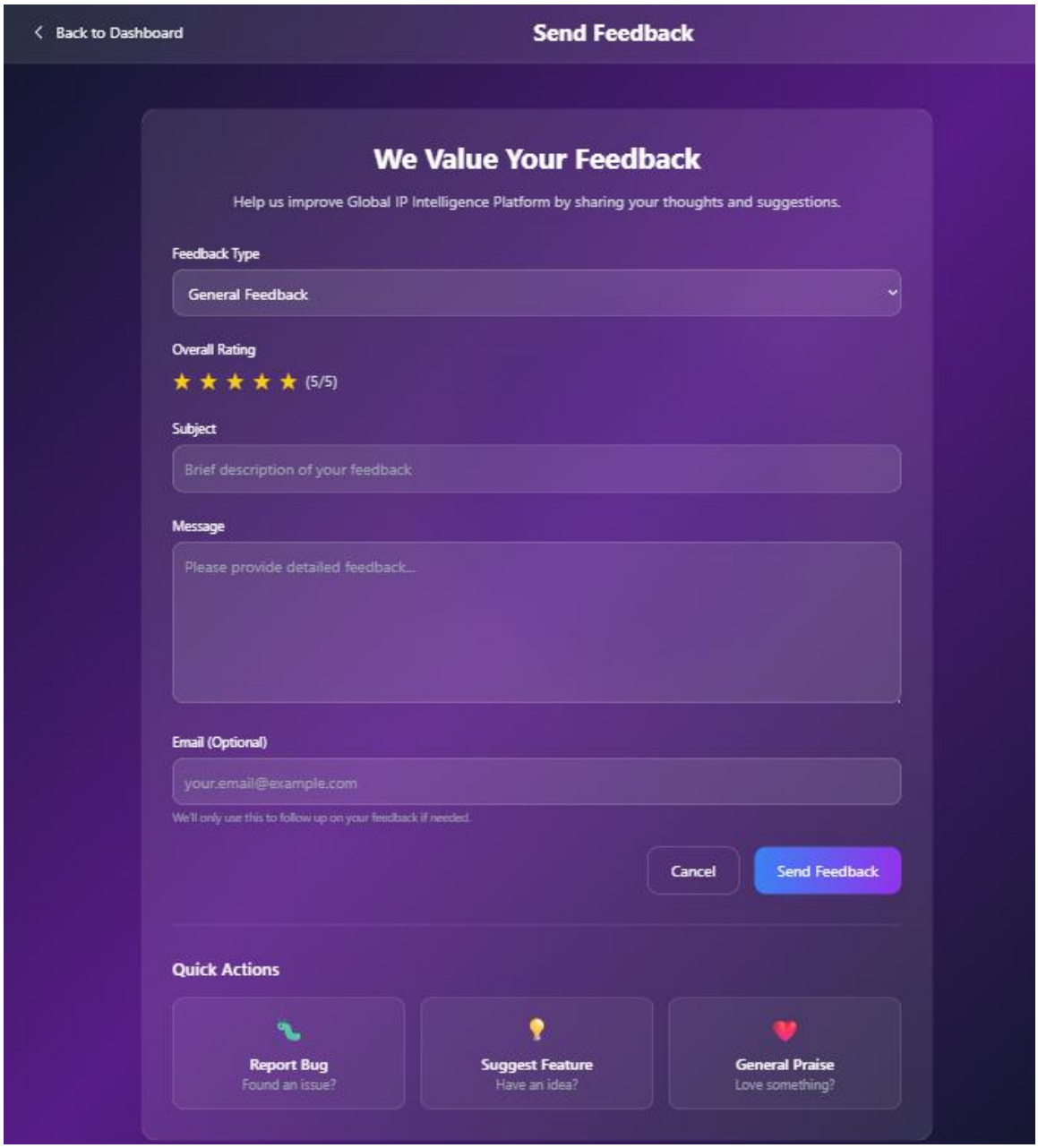
4.4 Feedback & Contact Forms (Firebase Integration)

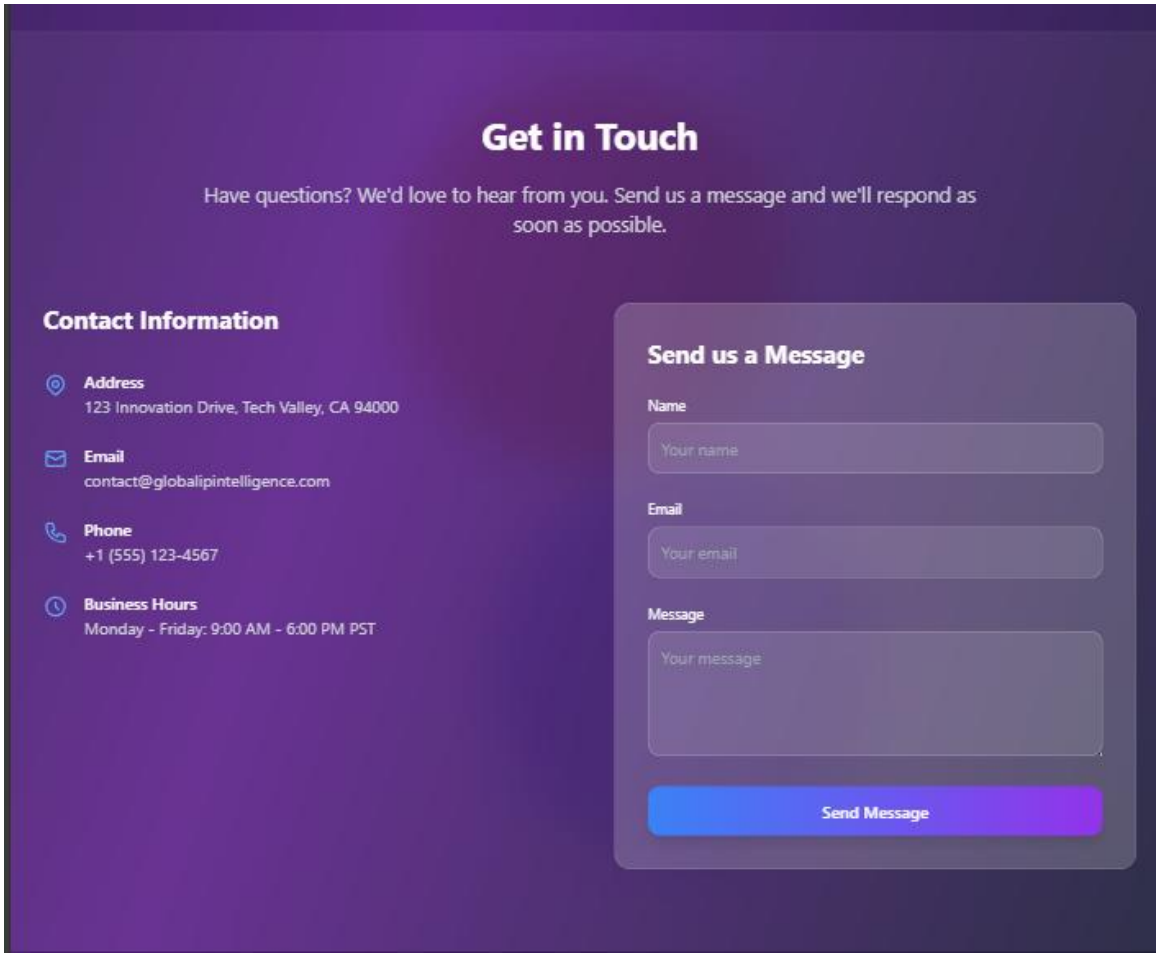
Two interactive forms were implemented using Firebase Firestore.

6. Forms Implemented:

- Send Us a Message (Landing Page)
- Feedback Form

Screenshot: Feedback & Contact Forms



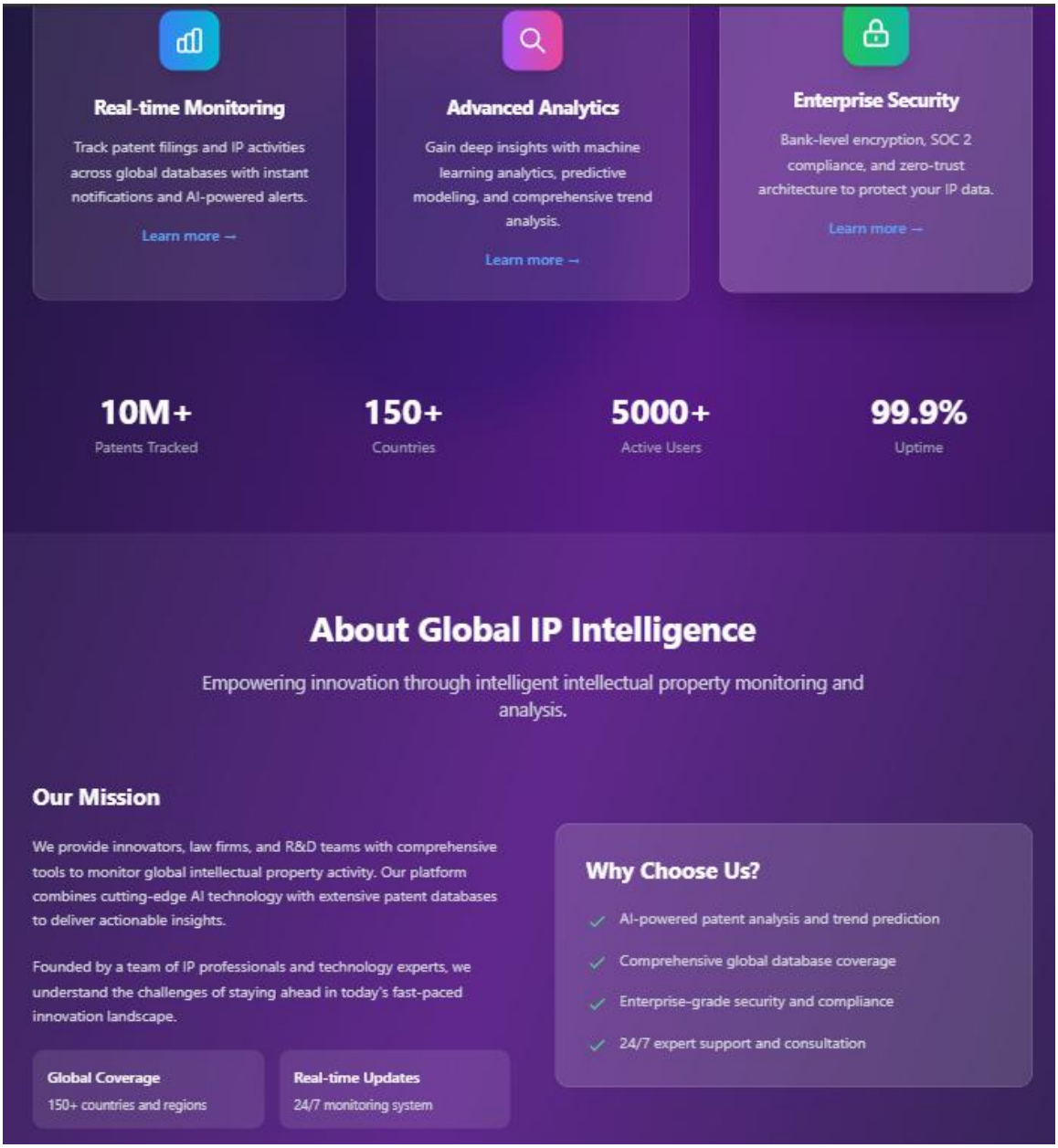


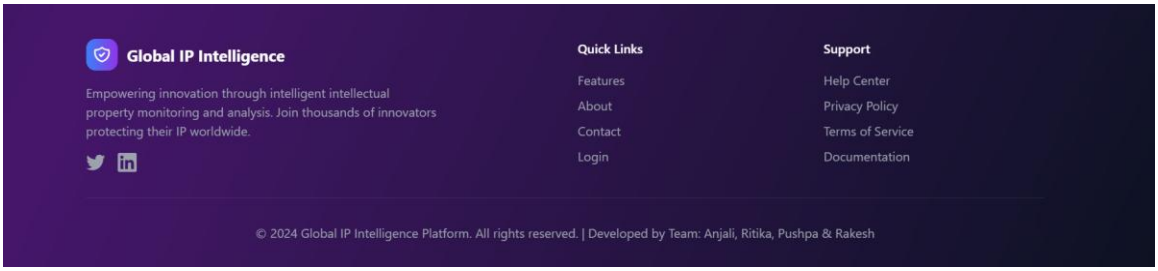
4.5 Landing Page Enhancements

The landing page was expanded to improve user engagement and professionalism by adding informational sections.

7. New Sections Added:

- About Us
- Contact Us
- Terms of Service
- Privacy Policy
- Help Center
- Feedback





5. Daily Work Log (Milestone 2)

Dec 16 – Designed Search Form UI

Dec 17 – Implemented search filters & parameters

Dec 18 – Created Search Results List view

Dec 19 – Added sorting and pagination

Dec 20 – Integrated Google Maps for IP distribution

Dec 21 – Linked map view with search results

Dec 22 – Dashboard UI/UX enhancements

Dec 23 – Implemented Firebase feedback & contact forms

Dec 24 – Landing page improvements & content sections

Dec 25 – Testing, bug fixing, and UI refinements

6. Challenges & Solutions

Challenge: Handling large search results	Solution: Implemented pagination
Challenge: Map integration complexity	Solution: Used mock data for stability
Challenge: API errors during development	Solution: Deferred backend API integration
Challenge: UI consistency across pages	Solution: Reused components and styles

7. Learning Outcomes

- Hands-on experience with Google Maps API
- Improved understanding of search-driven UI design
- Experience integrating Firebase into React
- Practical knowledge of data visualization
- Better UI/UX decision-making for complex platforms

8. Conclusion

During Milestone 2, I successfully implemented advanced search functionality, result visualization, map-based analytics, and dashboard enhancements for the Global-IPI-Platform. This milestone significantly improved the platform's usability and transformed it into a feature-rich IP intelligence system.

Milestone: 3

Focus Area: Filing Tracker Module & Subscription Module

1. Introduction

In this milestone, the platform was enhanced with advanced SaaS-level features including IP Filing lifecycle tracking and a subscription-based feature access system.

2. Milestone 3 Objectives

- Design and implement Filing Tracker module
- Track IP application, grant, renewal, and expiry status
- Provide alert and reminder UI for filings
- Design subscription plans and pricing page
- Implement test payment flow for subscriptions
- Restrict premium features based on subscription plan

3. Technologies Used

Frontend: React.js, React Router, JavaScript (ES6), Tailwind CSS

Visualization: Recharts

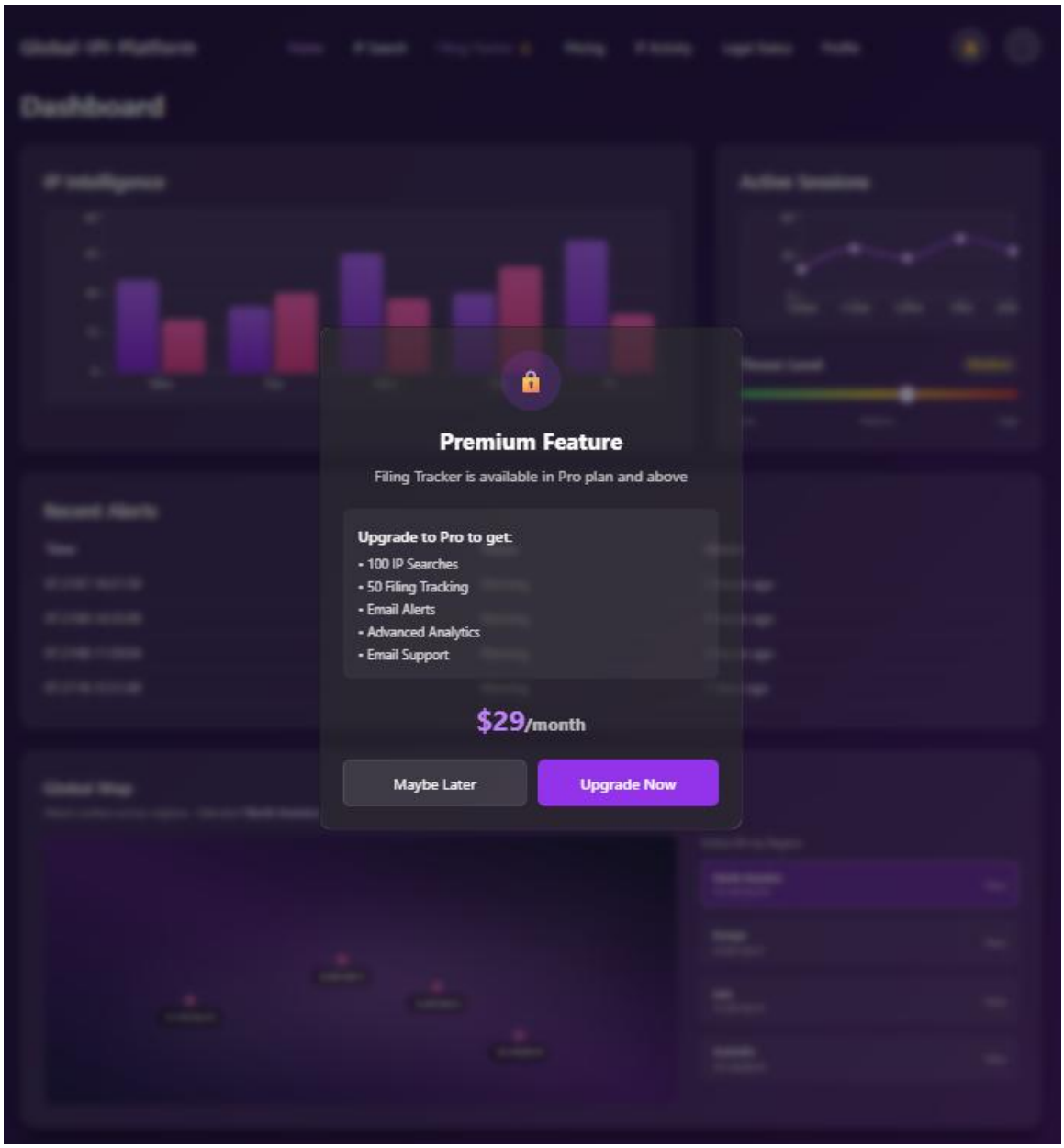
Tools: VS Code, GitHub

4. Features Implemented

4.1 Premium Feature Restriction

Premium features are restricted to Pro and Enterprise plans. Free users are shown an upgrade prompt.

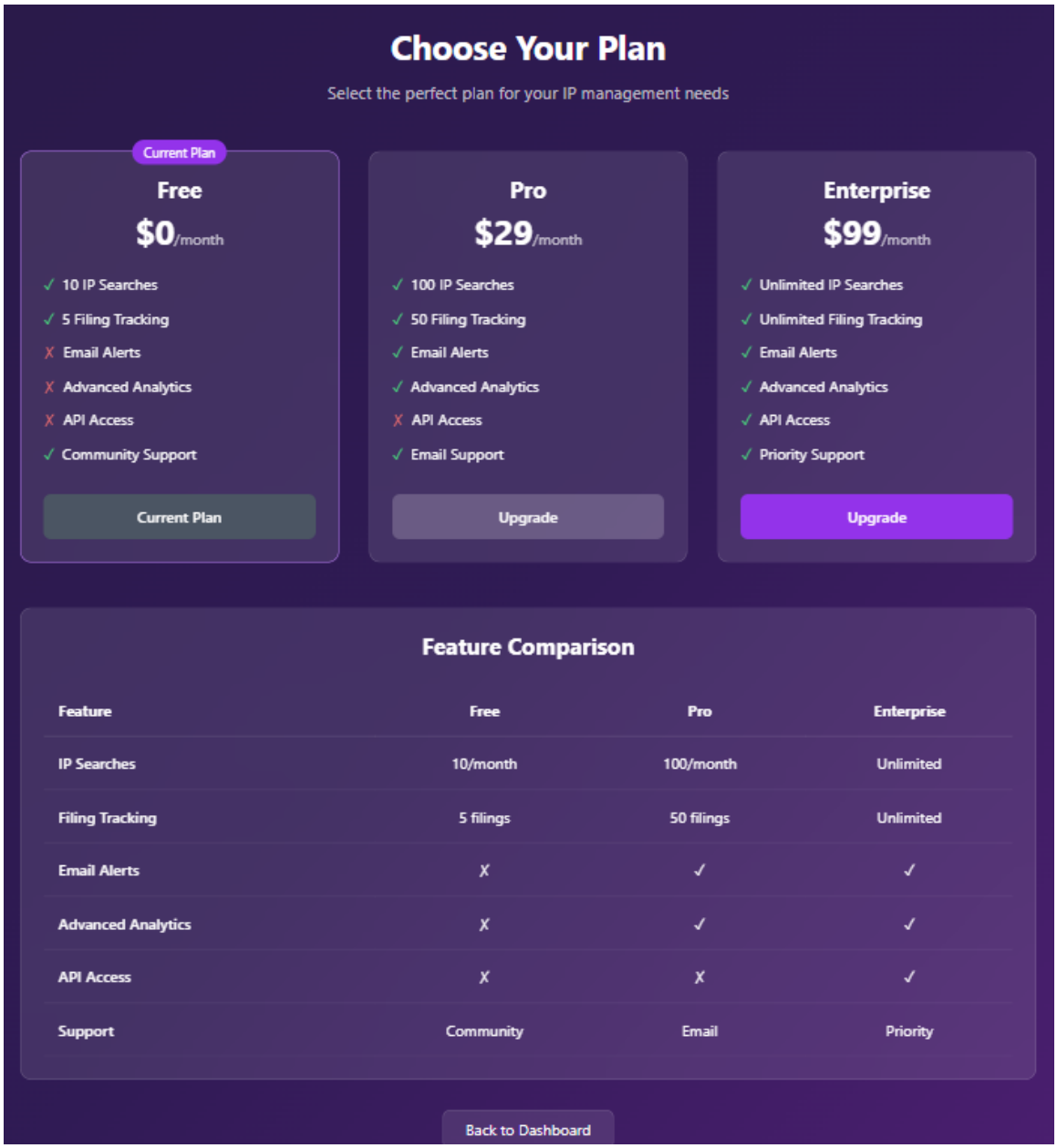
Screenshot: Premium Feature Lock Popup



4.2 Subscription & Pricing Module

A subscription system was implemented with Free, Pro, and Enterprise plans.

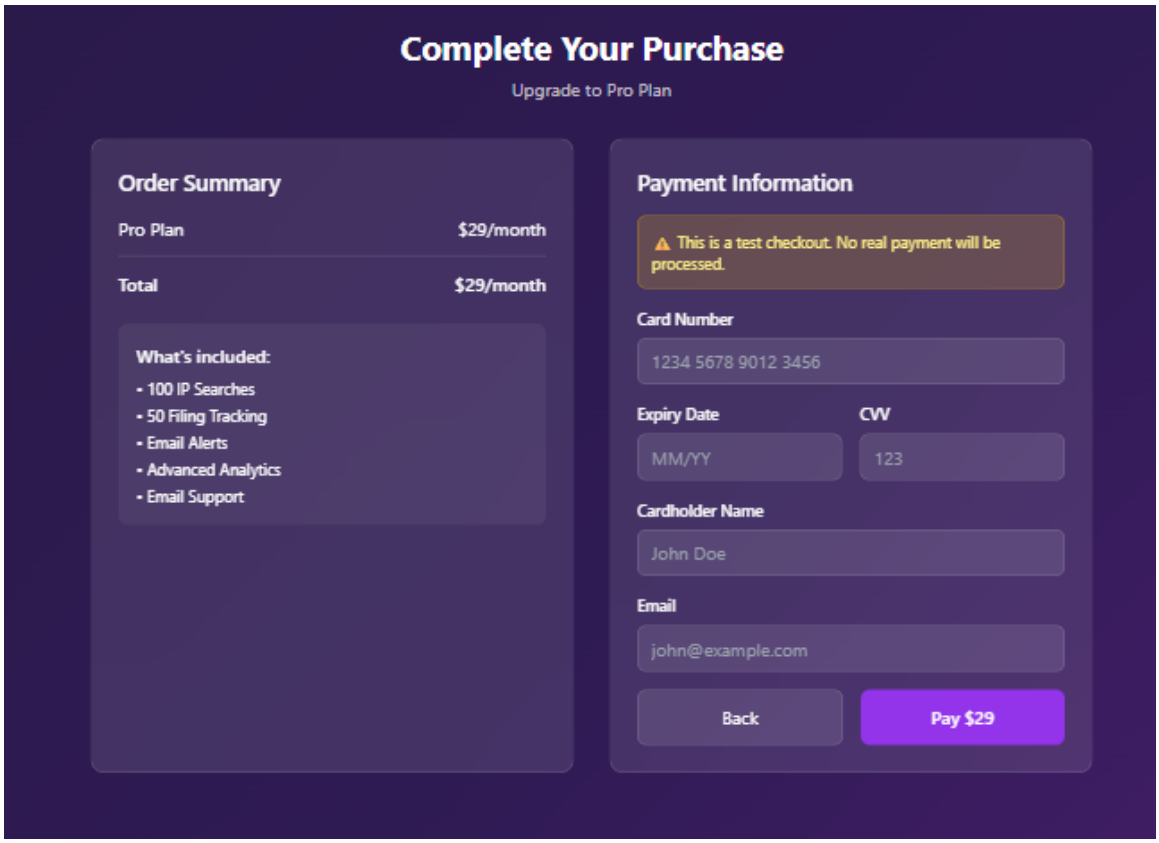
Screenshot: Pricing Page & Feature Comparison



4.3 Test Payment Flow

A mock payment checkout was implemented for subscription upgrades.

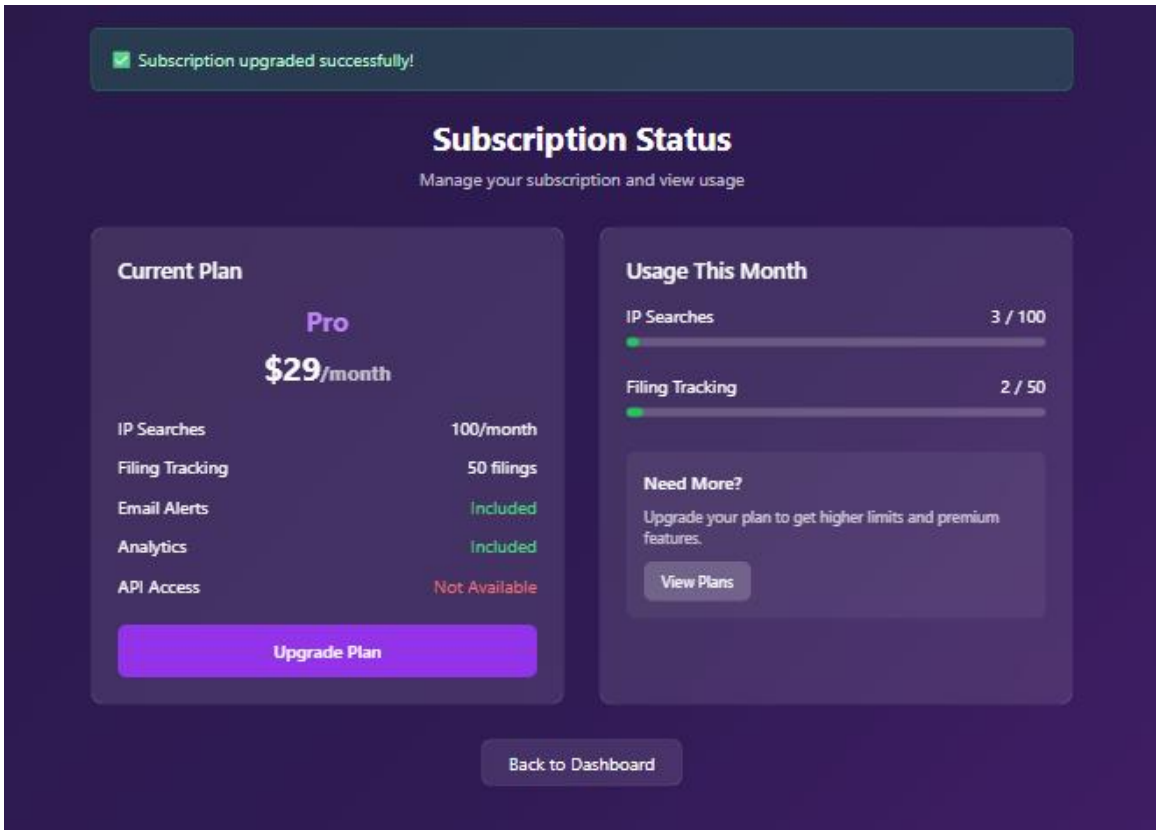
Screenshot: Test Payment Checkout



4.4 Subscription Status Dashboard

Users can view subscription details and monthly usage limits.

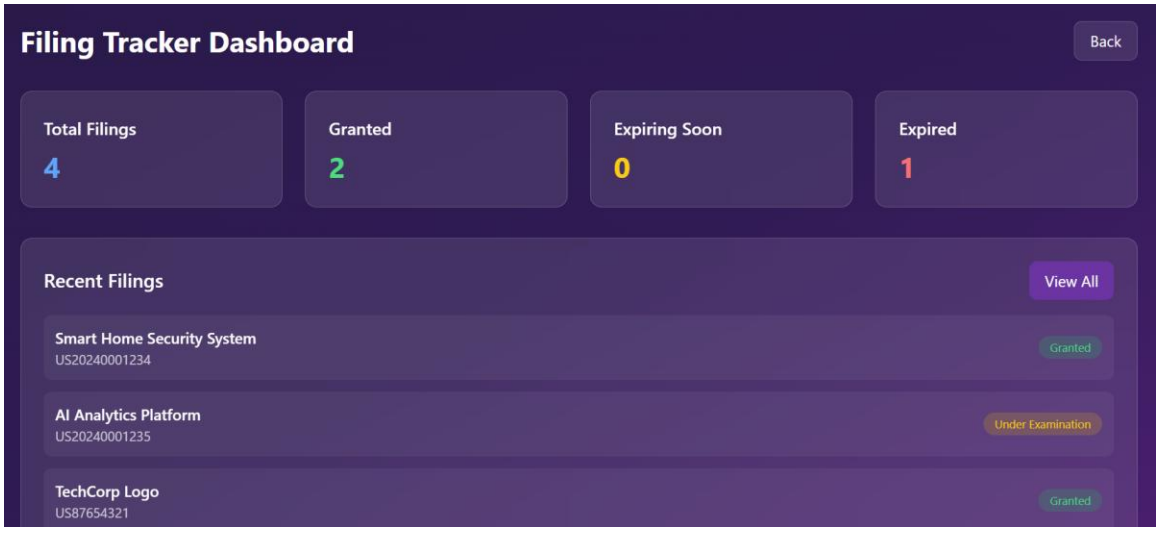
Screenshot: Subscription Status Page



4.5 Filing Tracker Dashboard

A dashboard summarizing IP filings including granted, expiring, and expired filings.

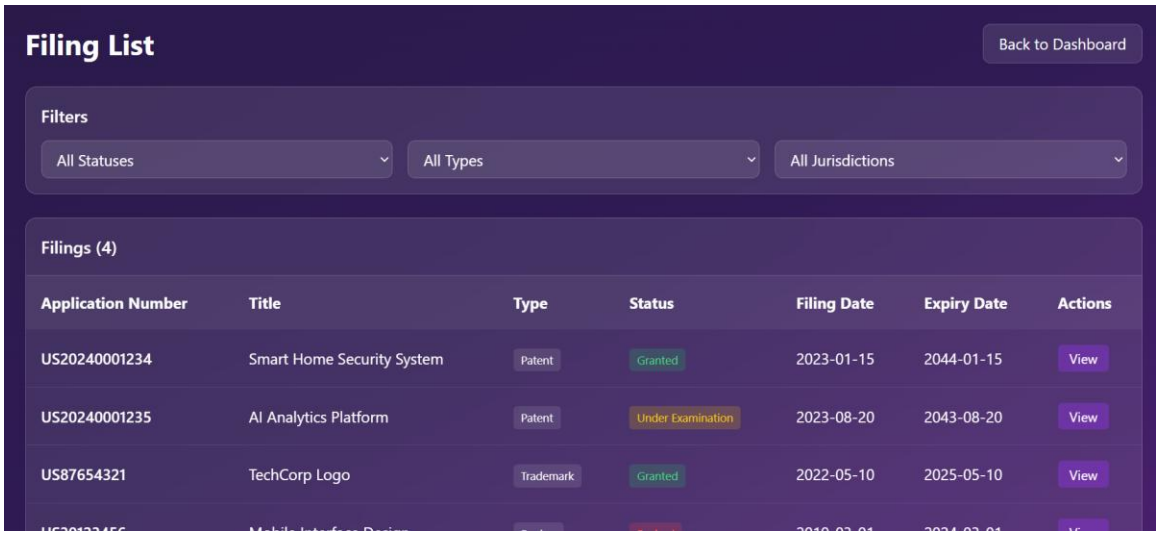
Screenshot: Filing Tracker Dashboard



4.6 Filing List & Filters

Detailed filing list with filtering by status, type, and jurisdiction.

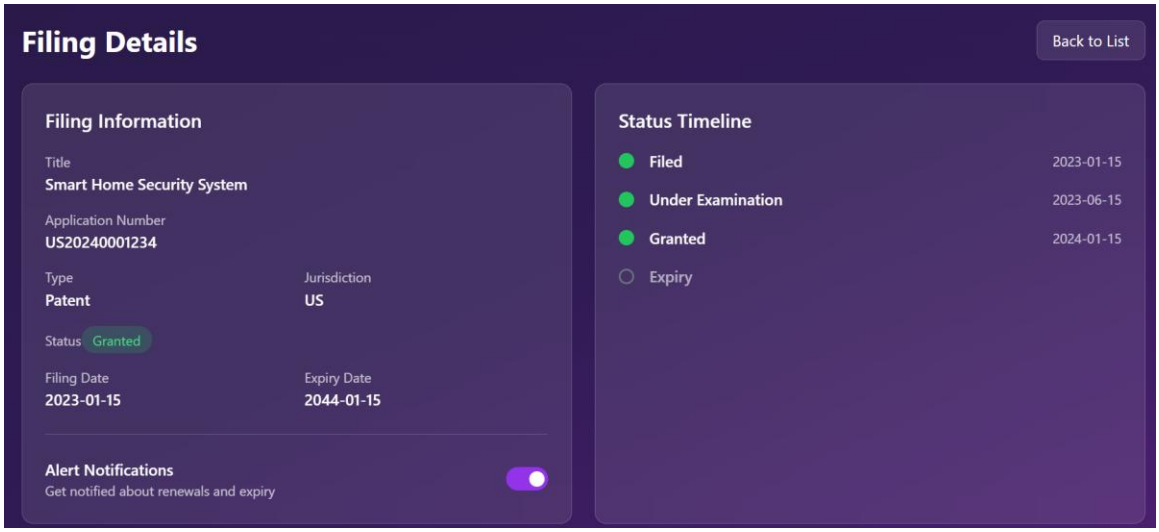
Screenshot: Filing List Page



4.7 Filing Details & Timeline

Detailed filing information with visual status timeline.

Screenshot: Filing Details Page



5. Challenges & Solutions

Complex filing lifecycle → Implemented timeline-based UI

Subscription logic → Used mock payment system

Feature restriction → Conditional rendering

6. Learning Outcomes

- SaaS subscription architecture
- IP filing lifecycle understanding
- Advanced UI/UX design

- Frontend access control

7. Conclusion

Milestone 3 elevated the platform to a professional SaaS-level solution by introducing filing management and subscription-based feature control.

Milestone 4

Milestone Duration: 12 January – 21 January

Focus Area: Admin Dashboard, Backend Integration, Filing Management

1. Introduction

This document describes the work completed during Milestone 4 of the Global-IPI-Platform project. The primary focus of this milestone was the design, development, and integration of the Admin Dashboard, along with full frontend–backend integration for administrative and filing management functionalities.

2. Milestone 4 Objectives

- Design and implement a complete Admin Dashboard
- Integrate frontend with backend APIs for admin functionalities
- Develop monitoring and management sections for administrators
- Implement Filing Form with frontend and backend integration
- Enable detailed filing tracking and lifecycle visualization
- Enhance UI/UX consistency across the entire platform

3. Technologies Used

Frontend Technologies

- React.js
- React Router
- JavaScript (ES6)
- Tailwind CSS
- Recharts

Backend Technologies

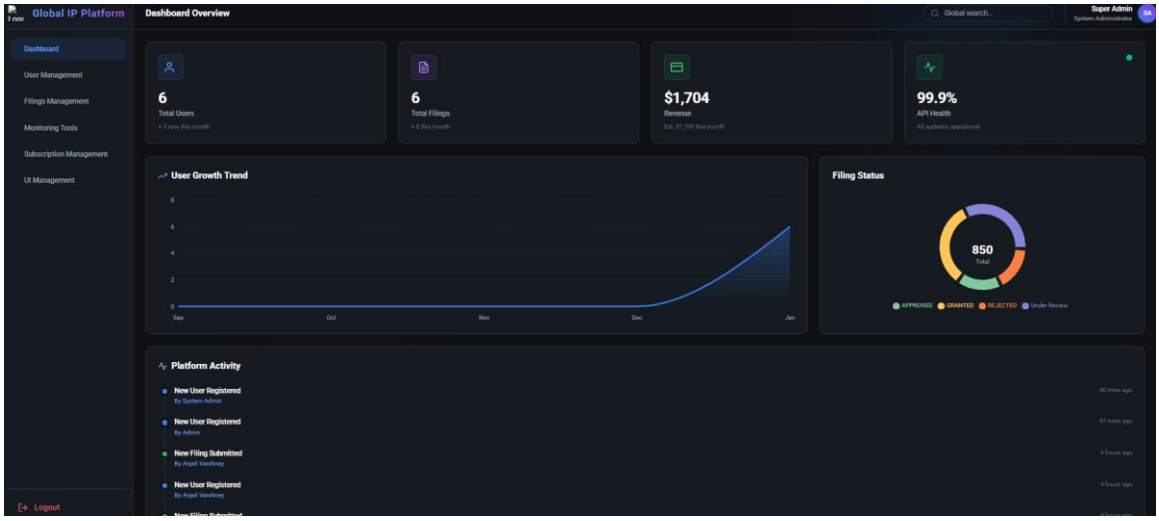
- Spring Boot
- Spring Security (JWT)
- REST APIs
- PostgreSQL

4. Features Implemented

4.1 Admin Dashboard

A comprehensive Admin Dashboard was developed including analytics, monitoring, and management features.

Screenshot: Admin Dashboard Overview



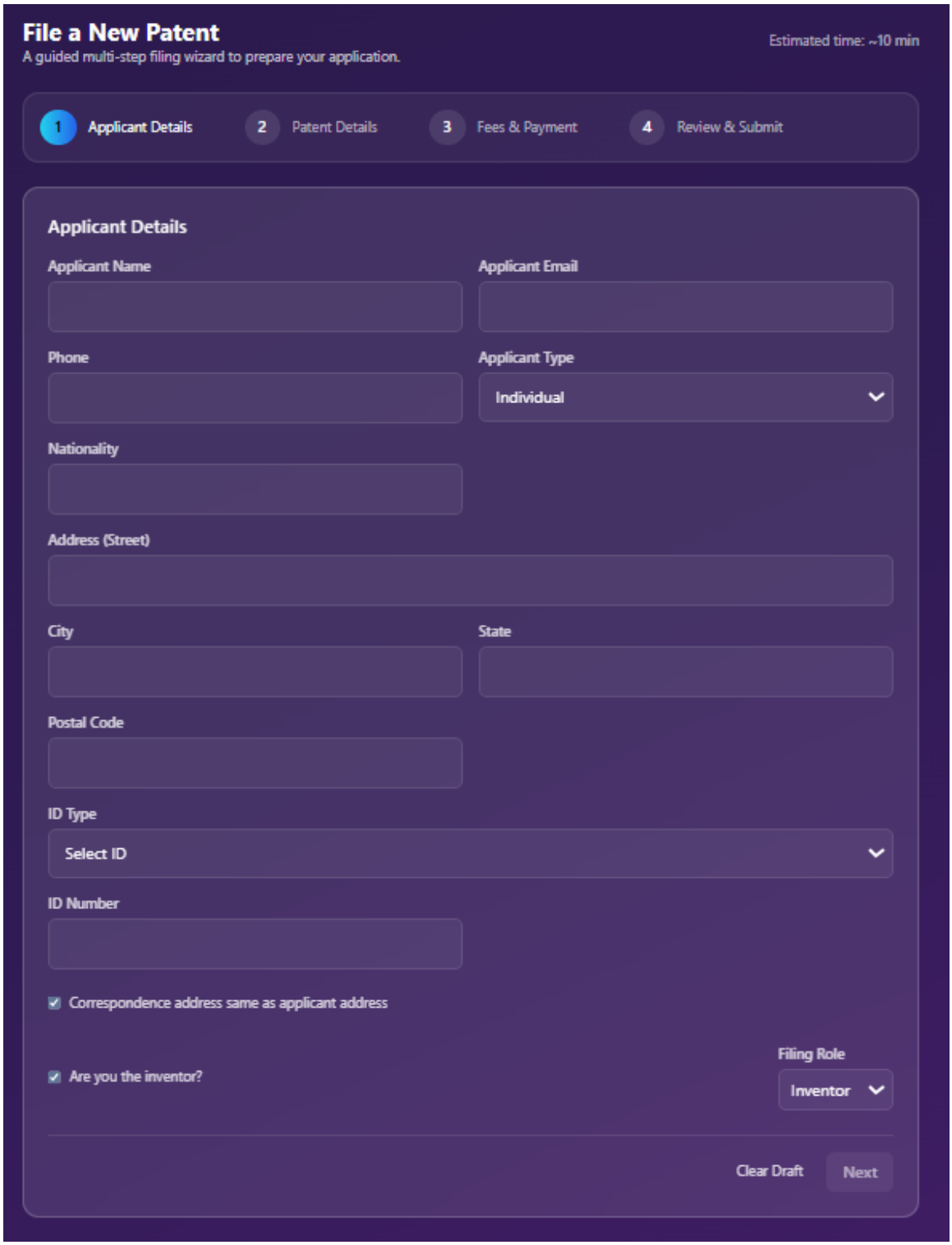
4.2 Frontend–Backend Integration

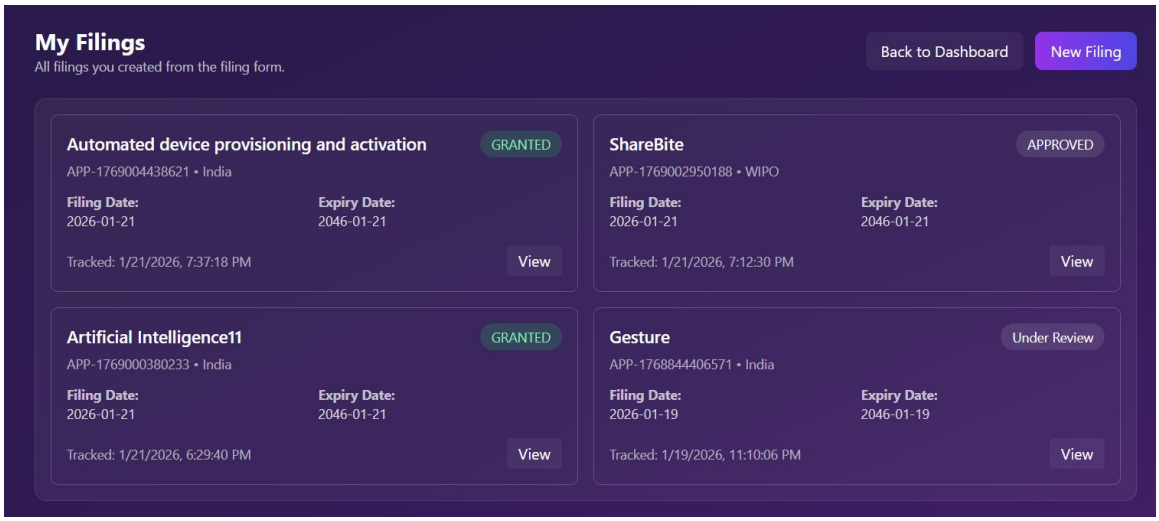
All admin modules were fully integrated with backend APIs.

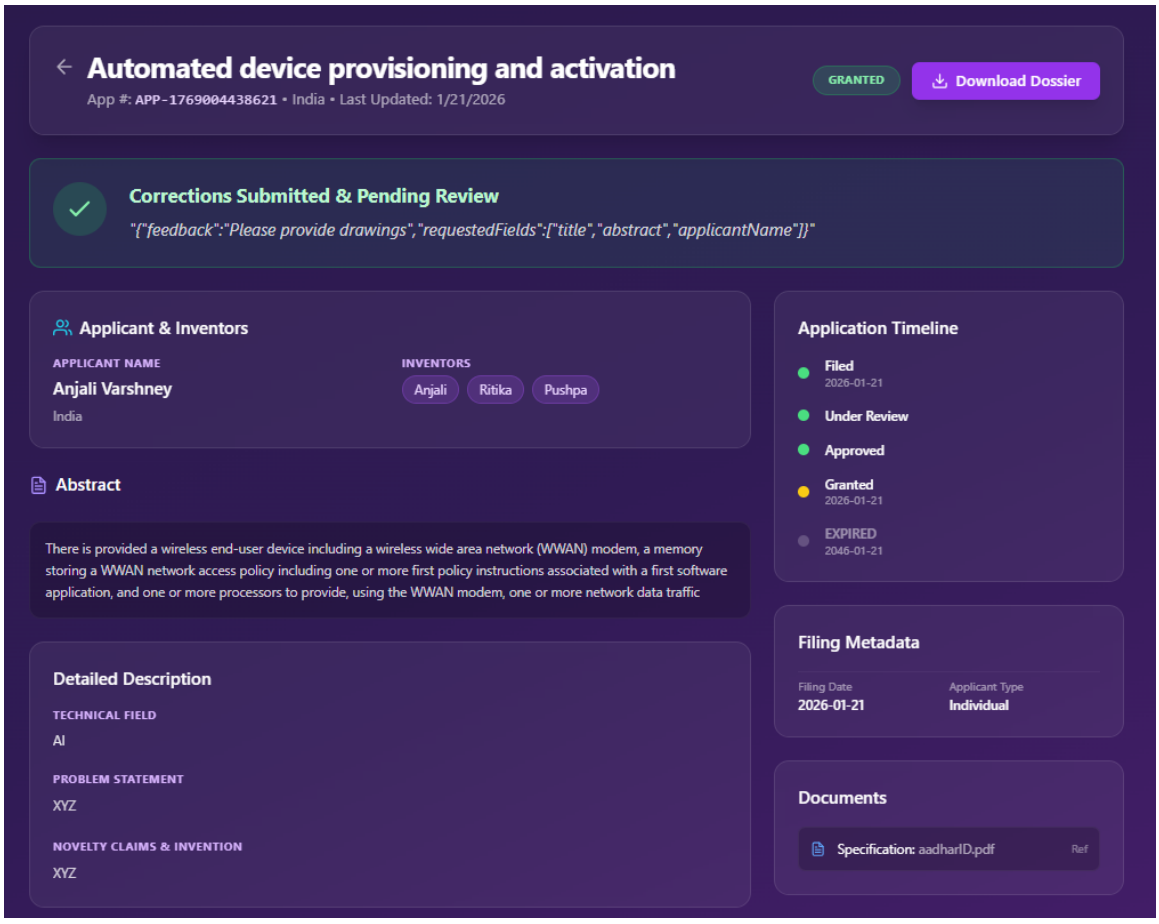
4.3 Filing Form & Management

A full filing management system including form submission, listing, and detailed views was implemented.

Screenshot: Filing Form



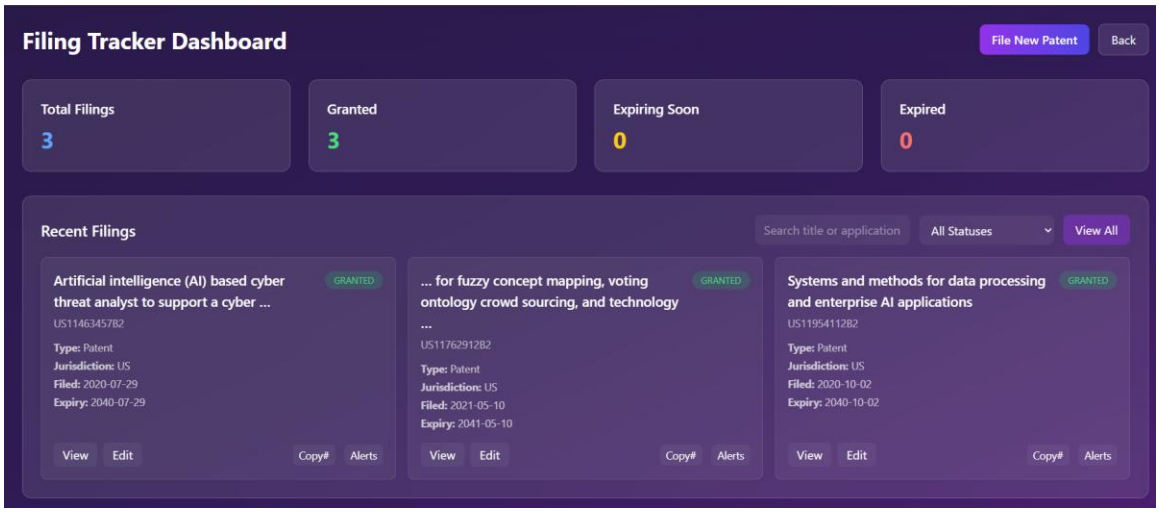


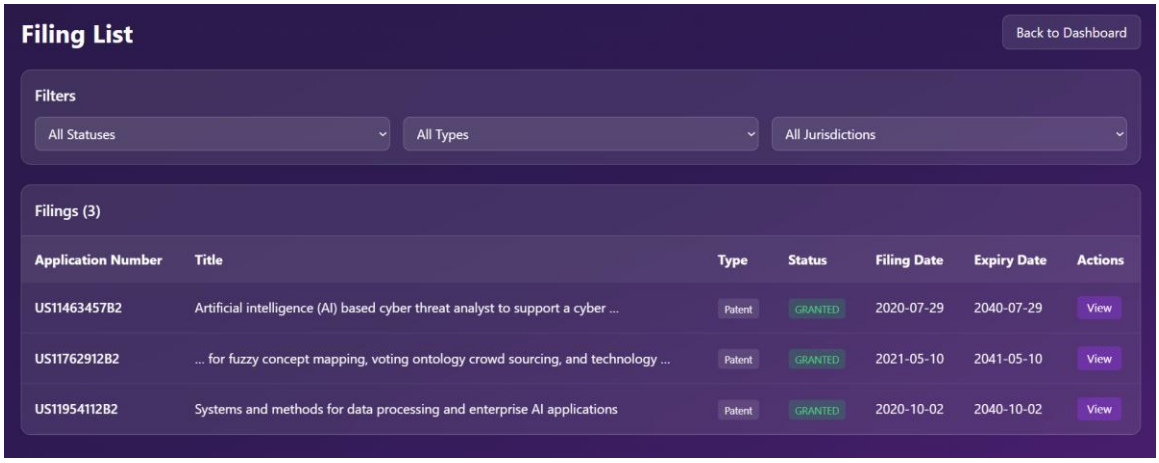


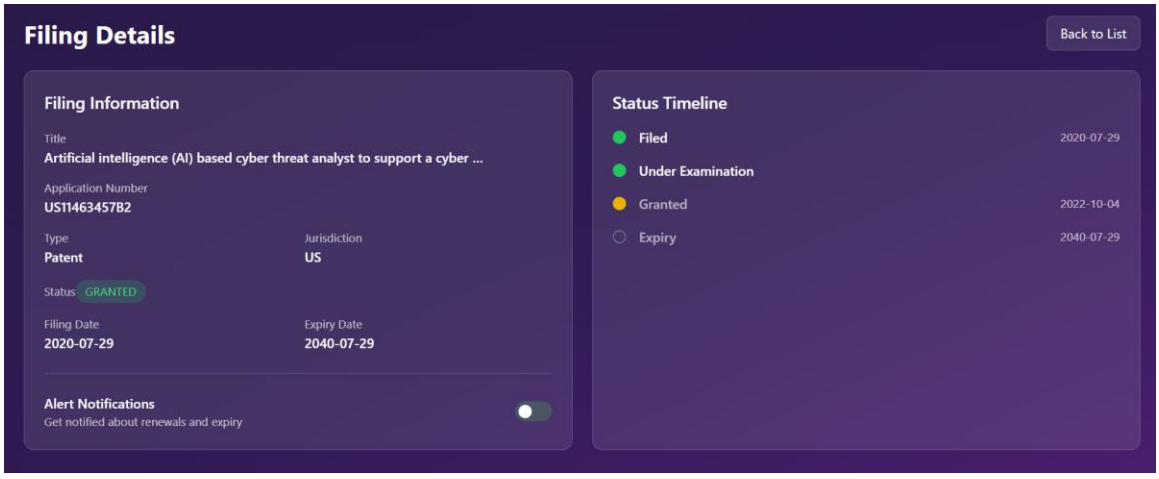
4.4 Filing Tracker & Lifecycle

Filing lifecycle tracking with visual timelines was implemented.

Screenshot: Filing Tracker

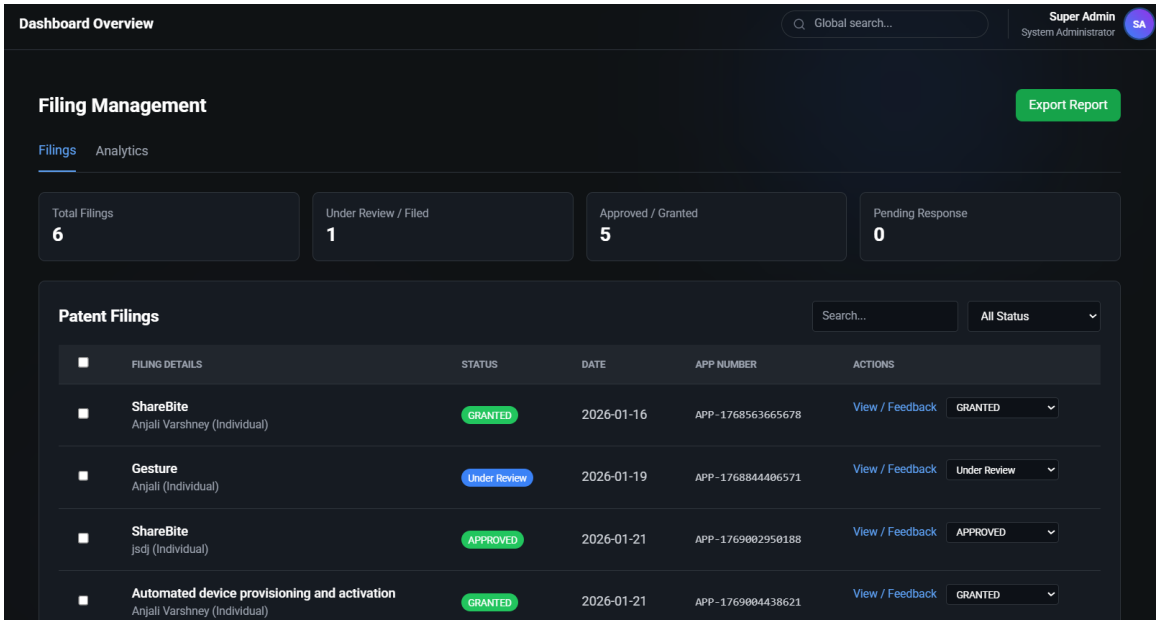






4.5 UI/UX Enhancements

UI/UX improvements were applied across the entire platform.


Dashboard Overview
Global search...
Super Admin
System Administrator
SA
Filing Management
Export Report
Filings
Analytics
Total Filings
6
Under Review / Filed
1
Approved / Granted
5
Pending Response
0
Patent Filings
Search...
All Status
FILING DETAILS
STATUS
DATE
APP NUMBER
ACTIONS
ShareBite
Anjali Varshney (Individual)
GRANTED
2026-01-16
APP-1768563665678
View / Feedback
GRANTED
Gesture
Anjali (Individual)
Under Review
2026-01-19
APP-1768844406571
View / Feedback
Under Review
ShareBite
jsdj (Individual)
APPROVED
2026-01-21
APP-1769002950188
View / Feedback
APPROVED
Automated device provisioning and activation
Anjali Varshney (Individual)
GRANTED
2026-01-21
APP-1769004438621
View / Feedback
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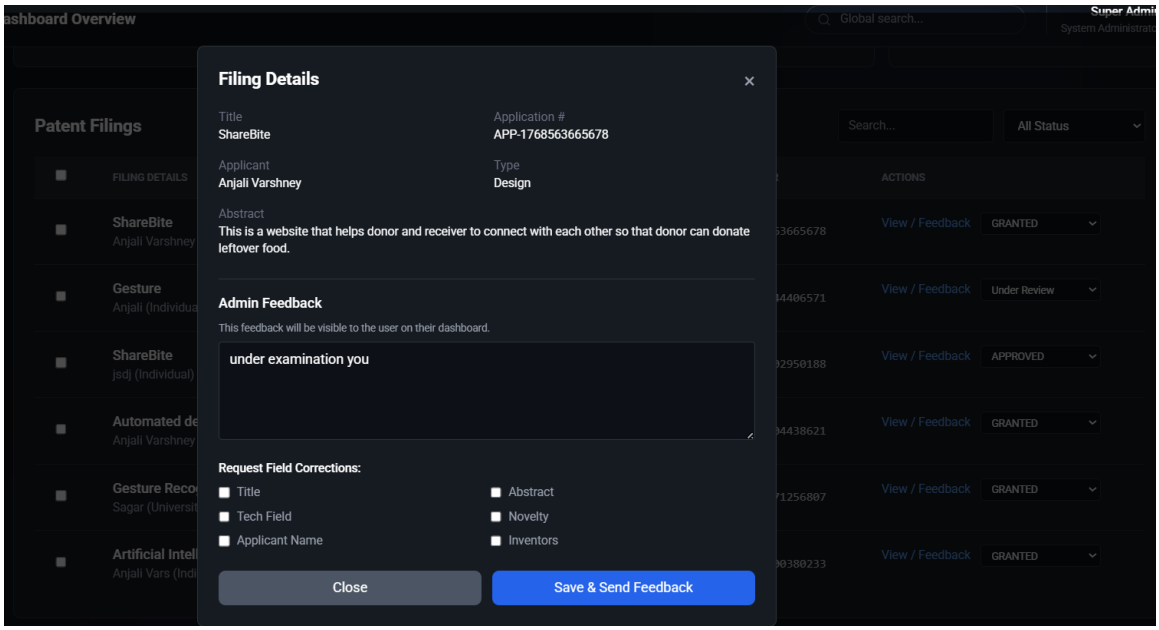
Filing Details
Title
ShareBite
Application #
APP-1768563665678
Applicant
Anjali Varshney
Type
Design
Abstract
This is a website that helps donor and receiver to connect with each other so that donor can donate leftover food.
Admin Feedback
This feedback will be visible to the user on their dashboard.
under examination you
Request Field Corrections:
Title
Abstract
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Novelty
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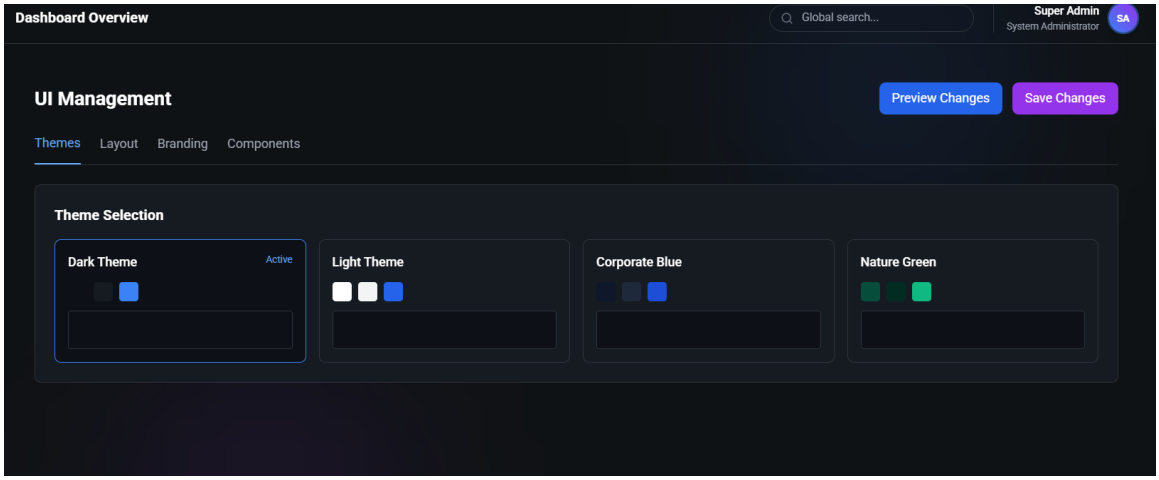

5. Challenges & Solutions

Admin data complexity → Modular APIs

Integration consistency → DTO-based contracts

Large datasets → Pagination & filters

6. Learning Outcomes

- Admin dashboard development
- Full-stack integration
- Filing lifecycle management
- UI/UX optimization

7. Additional Contributions

I independently completed filing form development, backend integration, and enhanced UI/UX consistency.

8. Conclusion

Milestone 4 delivered a fully integrated admin system and filing management module, making the platform enterprise-ready.