

Progress Report 4

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Project Name: F2025_4495_071_CKa004 (Weather Driver)

Work Log Table

Date	Number of hours	Description of work done
<i>Oct 26, 2025</i>	3.5	Analyzed existing map interface implementation. Identified UI/UX issues with the map screen layout. Reviewed redundant navigation elements. Documented findings for UI improvements
<i>Oct 27, 2025</i>	2	Assessed Google Maps API integration requirements. Reviewed autocomplete functionality issues. Analyzed API error messages (REQUEST_DENIED). Researched environment variable security practices
<i>Oct 28, 2025</i>	4	Removed redundant floating route button from MapScreen. Fixed bottom navigation tabs overlapping location button. Adjusted mapTabContainer positioning (60px → 90px). Tested layout changes across different screen sizes.
<i>Oct 29, 2025</i>	3	Improved visual hierarchy and UI spacing. Removed routeButton component and styles. Enhanced touch target accessibility. Verified UI improvements on multiple devices.
<i>Oct 30, 2025</i>	4	Created comprehensive Google Maps API setup documentation. Planned environment variable implementation strategy. Researched react-native-dotenv package. Designed team collaboration configuration approach.
<i>Nov 1, 2025</i>	2	Installed and configured the react-native-dotenv package. Updated babel.config.js with dotenv plugin. Modified googleMaps.js for environment

		variables. Created .env.example template. Updated .gitignore for security.
Nov 2, 2025	5	<p>GitHub Commit: “Configure Google Maps API with environment variables”• Commit Hash: 32e3c1b, along with other 2 commits.</p> <p>Every work done before this date is committed here on this date with proper description.</p> <p>Tested location selection functionality. Identified “Your location” button showing generic text. Analyzed reverseGeocode API response structure. Debugged ChooseStartLocationScreen implementation.</p>
Nov 3, 2025	3.5	Investigated ChooseDestinationScreen location handling. Discovered incorrect property access (address.formatted_address). Identified missing success status validation. Documented API response structure discrepancies.
Nov 4, 2025	4	Fixed reverse geocoding in ChooseStartLocationScreen. Implemented proper API response validation. Added error handling with fallback to generic text. Updated to display actual street addresses.
Nov 5, 2025	3.5	Fixed reverse geocoding in ChooseDestinationScreen. Ensured consistent error handling across both screens. Tested the address display for various locations. Verified coordinates are passed correctly.
Nov 6, 2025	4	Identified a similar issue in MapPickerScreen. Fixed “Choose on map” functionality. Updated handleMapPress with proper response validation. Tested map tap-to-select address display. Ensured consistency across all location methods
Nov 7, 2025	4.5	User testing revealed missing navigation directions. Analyzed ActiveNavigationScreen data flow. Investigated RoutePreviewScreen step data passing. Examined Google Maps API

		response structure, added console logging for debugging.
Nov 8, 2024	5.5	Analyzed console logs showing API response data. Fixed step data processing in RoutePreviewScreen. Implemented html_instructions extraction. Cleaned up debug logging code. Tested complete navigation flow end-to-end. GitHub Commits: 1. Commit 0056ae2: "Fix reverse geocoding" 2. Commit 05b6abb: "Fix MapPicker addresses" 3. Commit ba03aec: "Fix navigation instructions".

Description of Work Done:

During this reporting period, significant progress was made on the Weather Driver mobile navigation application, focusing on user interface improvements, Google Maps API integration, and navigation functionality enhancements. In Week 1 (October 26 - November 1), comprehensive UI/UX improvements were implemented to the map screen by removing redundant navigation elements and fixing layout overlap issues, which resulted in a cleaner and more intuitive user interface. A critical security enhancement was achieved through the implementation of environment variable management using react-native-dotenv, ensuring that API keys are properly protected from version control exposure. The Google Maps API configuration was thoroughly set up with proper documentation for team collaboration, including the creation of .env.example templates and babel configuration for secure environment variable handling.

In Week 2 (November 2 - November 8), the focus shifted to resolving location service issues where the reverse geocoding functionality was fixed across all location selection methods, enabling the application to display actual street addresses instead of generic text or coordinates. A critical navigation bug was resolved where turn-by-turn directions were not displaying in the active navigation screen; this was fixed by correcting the step data processing from the Google Maps API response to properly extract html_instructions fields. The complete navigation flow is now fully functional with proper error handling and fallback mechanisms implemented throughout.

Technical skills applied during this period included React Native development with component modification, state management, and navigation implementation, comprehensive API integration with Google Maps Directions API, Places API, and Geocoding API, security implementation

through environment variable management and API key protection, systematic debugging using console logging and API response analysis, professional Git version control with branch management and well-documented commit messages, root cause analysis for problem-solving, and maintaining high code quality standards with error handling and fallback mechanisms.

Three major challenges were successfully overcome: the API configuration challenge where autocomplete was not working despite the map displaying correctly, which was resolved by configuring environment variables and proper API key management; the location display issue where only generic text appeared instead of actual addresses, solved by fixing API response property access and validation; and the missing navigation instructions problem where turn-by-turn directions were not displaying, corrected by fixing the step data processing from the Google MapsAPI.

All changes were committed to the pravesh-updates branch with professional commits.