**Data Dictionary for VehicleVerified**

Version: 1.0

Date: July 14, 2025

**1. Introduction**

This document provides a detailed description of the data structures and fields used in the Cloud Firestore database for the "VehicleVerified" application. It serves as a reference for understanding how data is organized, stored, and related within the system.

**2. users Collection**

This collection stores information about all registered users, including both Vehicle Owners and Traffic Police officials.

**Path:** /users/{userId}

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| **Field Name** | **Data Type** | **Description** | **Example** |
| uid | String | **Primary Key (PK)**. The unique ID generated by Firebase Authentication for the user. | "zK4pL8sJqN9..." |
| name | String | The full name of the user. | "Suraj Kumar" |
| email | String | The user's registered email address. | "skr090850@gmail.com" |
| phone | String | The user's mobile number. | "+917274960865" |
| role | String | Defines the user's role. Can be either 'owner' or 'police'. | "owner" |
| officialId | String | **(Police Only)** The official identification number for a police officer. | "ID-987654" |
| profileImageUrl | String | **(Optional)** URL of the user's profile picture stored in Firebase Storage. | "https://firebasestorage.googleapis.com/..." |
| notificationPrefs | Map | A map containing the user's notification preferences. | {"expiryAlerts": true, "serviceReminders": true} |
| language | String | The user's preferred language for the app. | "English" |
| createdAt | Timestamp | The date and time when the user account was created. | July 10, 2025 at 10:00:00 AM UTC+5:30 |

**3. vehicles Collection**

This collection stores detailed information about each vehicle added by a Vehicle Owner.

**Path:** /vehicles/{vehicleId}

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| --- | --- | --- | --- |
| **Field Name** | **Data Type** | **Description** | **Example** |
| vehicleID | String | **Primary Key (PK)**. The unique auto-generated ID for the vehicle document. | "aXbYcZ12345..." |
| ownerID | String | **Foreign Key (FK)**. The uid of the user who owns this vehicle. Links to the users collection. | "zK4pL8sJqN9..." |
| make | String | The manufacturer of the vehicle. | "Honda" |
| model | String | The model name of the vehicle. | "Activa 6G" |
| registrationNumber | String | The vehicle's official license plate number. | "BR01AB1234" |
| engineNumber | String | The unique engine number of the vehicle. | "ENG987654" |
| chassisNumber | String | The unique chassis number of the vehicle. | "CHS543210" |
| vin | String | The Vehicle Identification Number. | "VIN123456789" |
| vehicleType | String | The category of the vehicle (e.g., 'Scooty', 'Car (SUV)'). | "Scooty" |
| registeredDate | Timestamp | The date when the vehicle was first registered. | March 15, 2023 at 12:00:00 AM UTC+5:30 |
| image | String | The local asset path for the vehicle's display image on the dashboard. | "assets/image/scooter.png" |
| createdAt | Timestamp | The date and time when the vehicle was added to the app. | July 11, 2025 at 11:30:00 AM UTC+5:30 |

**4. Sub-collections**

**4.1 documents Sub-collection**

This sub-collection is nested within each vehicle document and stores records for its associated documents.

**Path:** /vehicles/{vehicleId}/documents/{docId}

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| --- | --- | --- | --- |
| **Field Name** | **Data Type** | **Description** | **Example** |
| documentType | String | The type of the document (e.g., 'Insurance Policy', 'PUC'). | "Insurance Policy" |
| documentURL | String | **(Optional)** The URL of the uploaded document image stored in Firebase Storage. | "https://firebasestorage.googleapis.com/..." |
| policyNumber | String | **(Insurance Only)** The policy number of the insurance document. | "POL123456" |
| provider | String | The name of the insurance provider or PUC center. | "National Insurance" |
| expiryDate | Timestamp | The date when the document expires. | August 15, 2026 at 12:00:00 AM UTC+5:30 |
| uploadedAt | Timestamp | The date and time when the document record was created/uploaded. | July 12, 2025 at 2:00:00 PM UTC+5:30 |

**4.2 serviceHistory Sub-collection**

This sub-collection is nested within each vehicle document and stores records of all its past and booked services.

**Path:** /vehicles/{vehicleId}/serviceHistory/{historyId}

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| --- | --- | --- | --- |
| **Field Name** | **Data Type** | **Description** | **Example** |
| serviceType | String | The main title of the service (e.g., 'Custom Maintenance'). | "Custom Maintenance" |
| servicesPerformed | Array | A list of strings detailing the individual tasks performed during the service. | ["Engine Oil Replacement", "Brake Fluid Check"] |
| serviceDate | Timestamp | The date and time of the booked service appointment. | July 20, 2025 at 1:00:00 PM UTC+5:30 |
| cost | Number | The total fixed cost of the service. | 1299.00 |
| workshop | String | The name of the workshop where the service was performed. | "Verified Auto Center" |
| status | String | The current status of the service (e.g., 'Booked', 'Completed (Good)', 'Completed (Bad)'). | "Booked" |
| notes | String | Any additional notes or complaints provided by the user. | "Brakes are making some noise." |
| createdAt | Timestamp | The date and time when the service was booked. | July 14, 2025 at 3:00:00 PM UTC+5:30 |