

**Software Engineering V20**

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**ERD diagram for Ai Tracking Missing People**

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| **Entities** | **Attributes** | **Relationships** |
| **User** | * UserID (Primary Key) * Name * Email * ContactNumber * Role (Admin/User/Operator) * LoginCredentials | * One-to-many relationship with SearchRequest (a user can initiate multiple searches). * One-to-one relationship with Settings. |
| **MissingPerson** | * PersonID (Primary Key) * Name * Age * Gender * Description (clothing, accessories, distinguishing features) * LastKnownLocation * MissingSince (date/time) * Photo | * One-to-many relationship with SearchHistory. * One-to-many relationship with Alert (a missing person can generate multiple alerts). |
| **SearchRequest** | * RequestID (Primary Key) * UserID (Foreign Key) * PersonID (Foreign Key) * DescriptionDetails (search criteria) * RequestDateTime * Status (Pending/Completed) | * Many-to-one relationship with User. * One-to-one relationship with SearchHistory. |
| **SearchHistory** | * HistoryID (Primary Key) * RequestID (Foreign Key) * CameraID (Foreign Key) * Location * DateTimeDetected | * Many-to-one relationship with SearchRequest. * Many-to-one relationship with SurveillanceCamera. |
| **SurveillanceCamera** | * CameraID (Primary Key) * Location (GPS Coordinates) * IPAddress * Status (Active/Inactive) | * One-to-many relationship with SearchHistory. |
| **Alert** | * AlertID (Primary Key) * PersonID (Foreign Key) * CameraID (Foreign Key) * Location * AlertDateTime * AlertType (Facial Recognition/Attribute Recognition/RFID Tracking) * Status (Resolved/Unresolved) | * Many-to-one relationship with MissingPerson. * Many-to-one relationship with SurveillanceCamera. |
| **SystemSettings** | * SettingID (Primary Key) * UserID (Foreign Key) * NotificationPreferences * PrivacySettings | * One-to-one relationship with User. |

