# **1. Introduction**

Resolving parking congestion, transportation inefficiencies, and commuting difficulties on university campuses is the goal of the Campus Ride-Sharing Platform with Parking System Integration. With digital ID verification for safe access and integration with parking availability data, the system enables staff and students to share rides in real time. The interactions, system boundaries, and external entities that influence the platform's operational environment are listed in this paper.

# **2. Context Objects**

|  |  |  |
| --- | --- | --- |
| Name | Description | Role |
| Student | Students who use the platform to offer or request rides within campus. | Primary users; interact via mobile/web app |
| University Admin | University staff using the platform for commuting or parking information. | Secondary users |
| Campus Parking System | IoT-based system providing real-time parking lot availability data. | Supplies parking status to the platform |
| University Digital ID System | Identity verification system using student/staff digital credentials. | Authenticates users during registration |
| Security Personnel | |  | | --- | |  |  |  | | --- | | Campus authorities managing user verification and safety protocols. | | Monitor and approve new user access |
| Admin Interface | Management dashboard for system administrators. | Manage users, reports, and system settings |

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# **3. Requirements Sources**

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| --- | --- |
| **Requirements Sources** | **Justification** |
| **Student** | Direct stakeholders who define usability, security, and feature expectations |
| **University Admin** | Define policy constraints, approve access control mechanisms |
| **Campus Parking System** | Provides information about parking integration and APIs |
| **Digital ID System** | Define technical constraints for integration (API, authentication) |
| **Security Personnel** | Help define safety procedures, protocols, and emergency features |

# 4.Conclusion

The requirement sources and context objects serve as the cornerstone for comprehending the campus ride-sharing platform's operational environment. To guarantee that the platform satisfies institutional policies and functional expectations, these organizations direct the elicitation of system requirements.