

# Software Requirements Specification (SRS) Upark

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## 1 Introduction

### 1.1 Document Objective

This document establishes the functional and non-functional requirements for the development and implementation of the Parking Access Control System for the Technological University of Tijuana (UTT).

### 1.2 Project Scope

The system will address the automation of vehicle registration, the development of a web interface for checkpoint guards, and quick information retrieval to improve parking management and security.

## 2 Functional Requirements

### 2.1 Vehicle Registration Automation

Student Registration: Develop a platform that allows the systematic registration of vehicles associated with UTT students, including information such as names, license plates, models, and years of automobiles.

### 2.2 Development of a Web Interface for Checkpoint Guards

Intuitive Interface: Create an intuitive and user-friendly web interface for checkpoint guards. Access to Detailed Information: Allow checkpoint guards to access detailed information about vehicles and owners before authorizing access to the parking lot.

### 2.3 Quick Information Retrieval

Efficient Search: Facilitate quick and effective searches for information on specific vehicles and owners for checkpoint guards.

## 3 Non-Functional Requirements

### 3.1 Security

Access Verification: Implement a secure access verification mechanism to reduce the risk of unauthorized entries.

### 3.2 Performance

Quick Response: Ensure a quick system response, especially during real-time information queries.

### 3.3 Usability

Intuitive Interface: Ensure that the web interface is intuitive and easy to use for checkpoint guards.

## **4 Context and Justification**

### **4.1 Objective of Database Knowledge Extraction**

Data Conversion: Perform knowledge extraction in the database to convert stored data into valuable and meaningful information.

### **4.2 Motivation**

Enhanced Security: Strengthen parking lot security by implementing an access control system. Improved Decision Making: Facilitate informed decision-making for checkpoint guards.

## **5 Issues or Needs**

### **5.1 Problem Identification**

Current Issues: Address identified issues in the current parking management system.

## **6 Applications**

### **6.1 Service Customization**

Personalized Recommendations: Provide personalized services to users based on historical patterns

### **6.2 Technological Modernization**

License Plate Recognition: Implement advanced technologies, such as license plate recognition, to modernize parking services.

### **6.3 Enhanced Security**

Access Control: Strengthen parking lot security through access control and license plate recognition.