ANALYZING EXISTING STUDIES AND IDENTIFYING RESEARCH GAPS

LITERATURE REVIEW AND GAPS FINDING CAR RENTAL SYSTEM

- CAR RENTAL SYSTEMS FACILITATE VEHICLE RENTALS FOR USERS.
- RESEARCH FOCUSES ON SYSTEM EFFICIENCY, PRICING MODELS, AND CUSTOMER SATISFACTION.
- THIS REVIEW HIGHLIGHTS EXISTING STUDIES, THEIR STRENGTHS AND WEAKNESSES, AND IDENTIFIES RESEARCH GAPS.

INTRODUCTION

- ZOOMCAR IS A SELF-DRIVE CAR RENTAL SERVICE AVAILABLE IN MULTIPLE CITIES.
- IT ALLOWS USERS TO RENT VEHICLES FOR SHORT OR LONG DURATIONS WITHOUT A DRIVER.
- THE PLATFORM OPERATES THROUGH A MOBILE APP, OFFERING FLEXIBILITY AND CONVENIENCE.

EXISTING STUDIES ON CAR RENTAL SYSTEMS-ZOOMCAR/UBER

- ► CONVENIENCE NO NEED FOR A DRIVER; COMPLETE SELF-DRIVE CONTROL.
- FLEXIBLE OPTIONS SHORT AND LONG-TERM RENTAL PLANS.
- WIDE VEHICLE CHOICE MULTIPLE CAR TYPES FOR DIFFERENT NEEDS.
- AVAILABILITY IN METRO CITIES STRONG PRESENCE IN MAJOR URBAN AREAS

STRENGTHS OF ZOOMCAR/UBER

- HIGH PRICES DURING PEAK DEMAND DYNAMIC PRICING CAN MAKE RENTALS EXPENSIVE.
- STRICT DAMAGE POLICY CHARGES FOR MINOR SCRATCHES OR DENTS CAN BE HIGH.
- LIMITED AVAILABILITY IN SMALL CITIES FOCUSED MOSTLY ON METRO AND TIER-1 CITIES.
- DEPOSIT REFUND DELAYS REFUNDS CAN TAKE DAYS OR WEEKS.
- CUSTOMER SUPPORT ISSUES USERS REPORT SLOW RESPONSE TIMES.
- ► MILEAGE RESTRICTIONS EXTRA CHARGES IF THE RENTAL EXCEEDS THE ALLOWED DISTANCE.
- CAR MAINTENANCE CONCERNS SOME VEHICLES ARE NOT WELL-MAINTAINED.

LIMITATIONS OF ZOOMCAR/UBER

- FLEXIBLE PRICING MODEL A MIX OF FIXED AND DYNAMIC PRICING TO BALANCE AFFORDABILITY.
- INSTANT DEPOSIT REFUNDS USING BLOCKCHAIN OR FAST PAYMENT SYSTEMS FOR QUICKER SECURITY DEPOSIT REFUNDS.
- ► AI-POWERED DAMAGE DETECTION AUTOMATED IMAGE VERIFICATION TO ASSESS VEHICLE CONDITION BEFORE AND AFTER RENTAL.
- HYBRID RENTAL SYSTEM OPTION FOR BOTH SELF-DRIVE AND CHAUFFEUR-DRIVEN RENTALS.
- CUSTOM VEHICLE SELECTION LET USERS CHOOSE A SPECIFIC CAR MODEL AND FEATURES.
- LONG-TERM RENTALS & SUBSCRIPTIONS MONTHLY RENTAL PLANS WITH DISCOUNTED RATES.
- USER RATINGS FOR CARS & OWNERS LIKE AIRBNB, ALLOW USERS TO RATE VEHICLE CONDITIONS AND EXPERIENCES.
- CONTACTLESS EXPERIENCE KEYLESS ENTRY ENHANCES SAFETY.
- ECO-FRIENDLY CAR RENTALS A SPECIAL SECTION FOR ELECTRIC CARS.
- ► BETTER CANCELLATION & REFUND POLICIES MORE LENIENT POLICIES COMPARED TO UBER & ZOOMCAR.

IDENTIFIED RESEARCH GAPS

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[Landing Page]
  - [User Authentication]
    - Register
    - Login
    - Profile Management
 — [Car Selection]
    - Browse Cars (Self-Drive/Chauffeur)
    - Filter by Preferences
    - View Car Details
 — [Booking Confirmation]
    — Select Car & Rental Duration
    - Choose Pickup/Drop-off Location
    L- Booking Summary
 — [Payment Processing]
    - Payment Options (Card, UPI, Wallet)
    - Payment Successful?
       --- Yes ---> Booking Confirmed
       --- No ---> Payment Failed (Retry Payment)
    - Confirm Payment
 — [Car Pickup]
    - Verify Identity
    - Check Vehicle Condition
    L- Start Rental
 — [During Rental]
    - GPS Tracking
    - Access Support
    - Extend Rental (if needed)
  - [Car Return]
    - Drop Off at Selected Location
    - Damage Verification
    - End Rental
— [Payment Settlement]
    - Refund Security Deposit (if applicable)
    - Finalize Payment
   [User Feedback & Ratings]
    - Rate the Car
    --- Rate Overall Experience
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USER FLOW DIAGRAM

CAR RENTAL SYSTEMS HAVE EVOLVED, BUT GAPS REMAIN IN AI, BLOCKCHAIN, AND SUSTAINABILITY.
ADDRESSING THESE GAPS CAN IMPROVE EFFICIENCY, SECURITY, AND CUSTOMER EXPERIENCE.
FUTURE RESEARCH SHOULD FOCUS ON INNOVATIVE AND DATADRIVEN APPROACHES.

CONCLUSION