



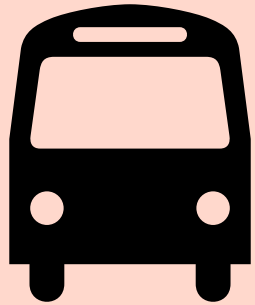
Spartan Ride: The SJSU Shuttle Services; An App for Everyone

The Bask Bashers

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Why We Built Spartan Ride:

Fixing the Commute Challenge



The Problem

Long commutes, crowded transit, and unpredictable delays make getting to campus stressful and inefficient.



Key Pain Point

Valuable time lost in transit—every single day



The Solution: Spartan Ride



Features:

- Dedicated SJSU shuttle app
- Built for the campus community
- Covered wide area in South Bay



Benefits:

- Smart, safe, and time-saving
- Designed to improve your commute

What Spartan Ride Offers: Overview



Student & Faculty

- Ride Booking and Payment
- View Trip History
- Leave Feedback and Rates
- View Profiles



Driver

- View Today's Schedule
- View Work Log
- Check Feedback
- View Profiles



Admin

- View and Edit DB Information
- View Dashboards



Tools & Source for Development

Tools Used:

Python, PyCharm, PyQt, MySQL, GitHub, ERDPlus

Python Libraries and SQL queries:

Numpy, Pandas, PyQt, Matplotlib, Seaborn, Smtplib library for email and mysql-python connector

Data Sources:

- Mockaroo: <https://www.mockaroo.com/>

Demo Login Info

Student

ID: S065674646

PW: Welcome@259

Faculty

ID: F834567890

PW: Welcome@441

Admin

ID: A018236023

PW: Welcome@999

Driver

ID: D199719242

PW: Welcome@460



Student & Faculty Portal: Your Ride, Your Way

Profile Management

Update personal info quickly and securely.

Ride Booking

Book rides easily with real-time tracking and scheduling.

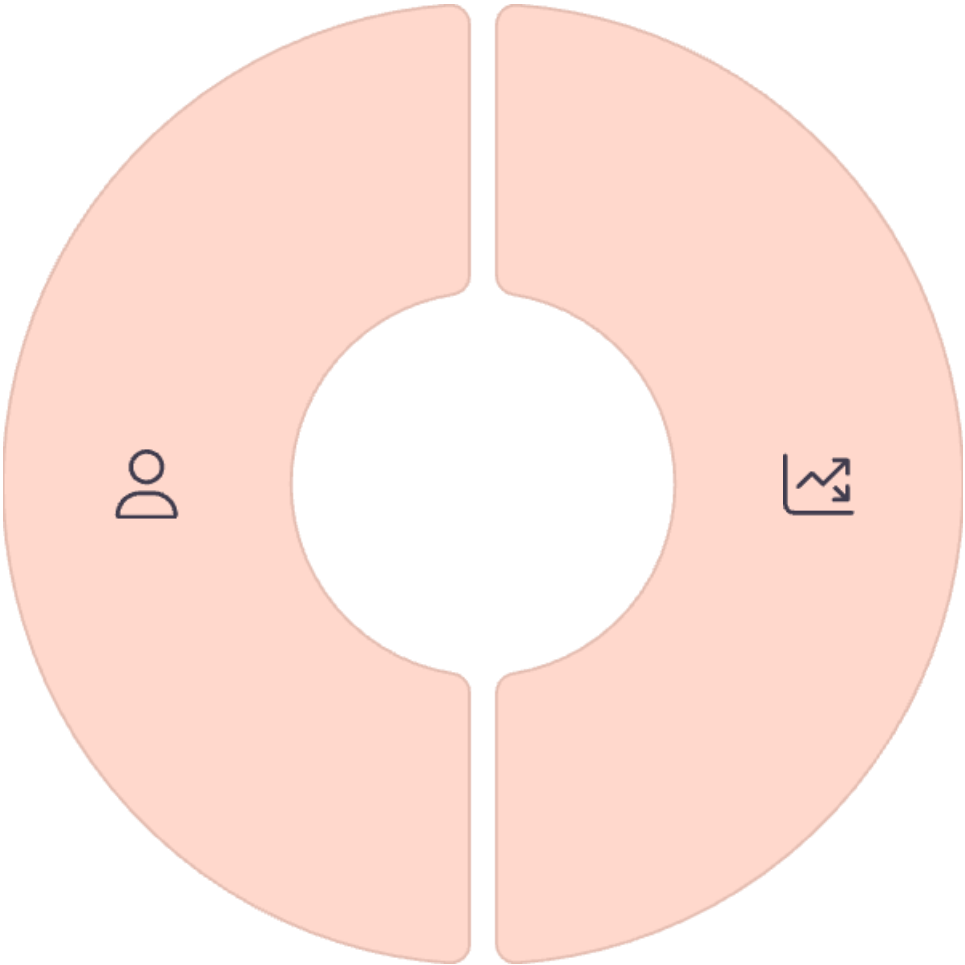
Ride History & Wallet

Track past rides and manage your balance effortlessly.

Admin Portal: Oversight and Management

User Management

View and manage drivers, students, and faculty accounts.



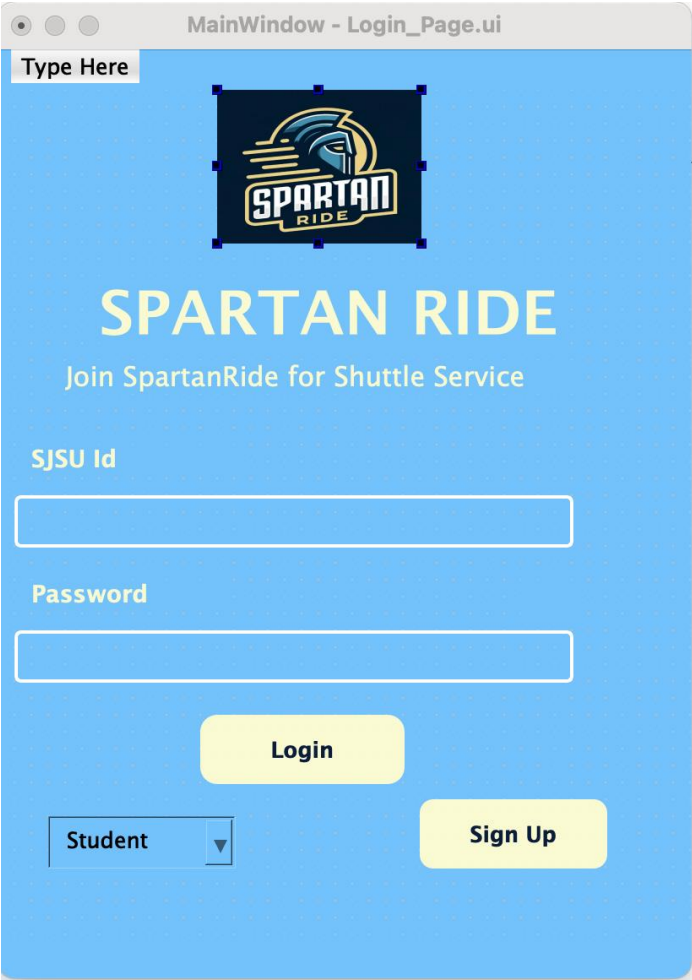
Analytics

System-wide performance tracking with detailed ride data.

Key Features in Action: Screenshots & Demos

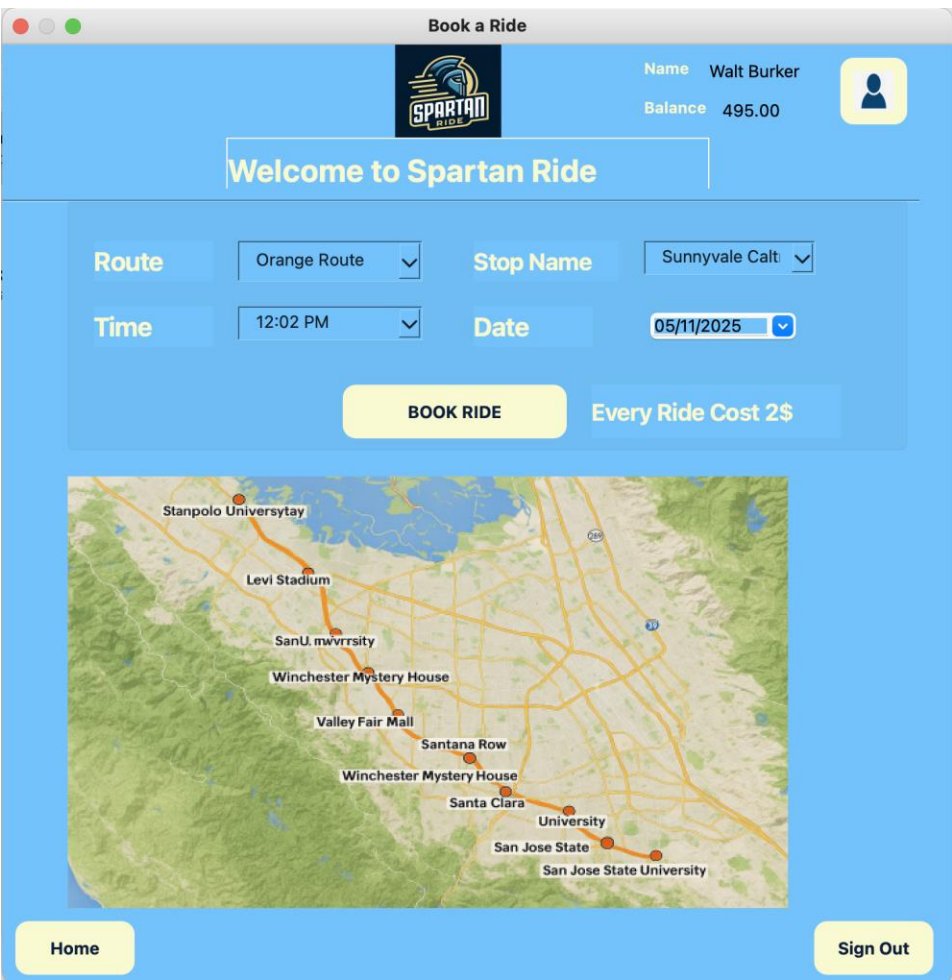
Login Screens

Distinct entry points for all user types.



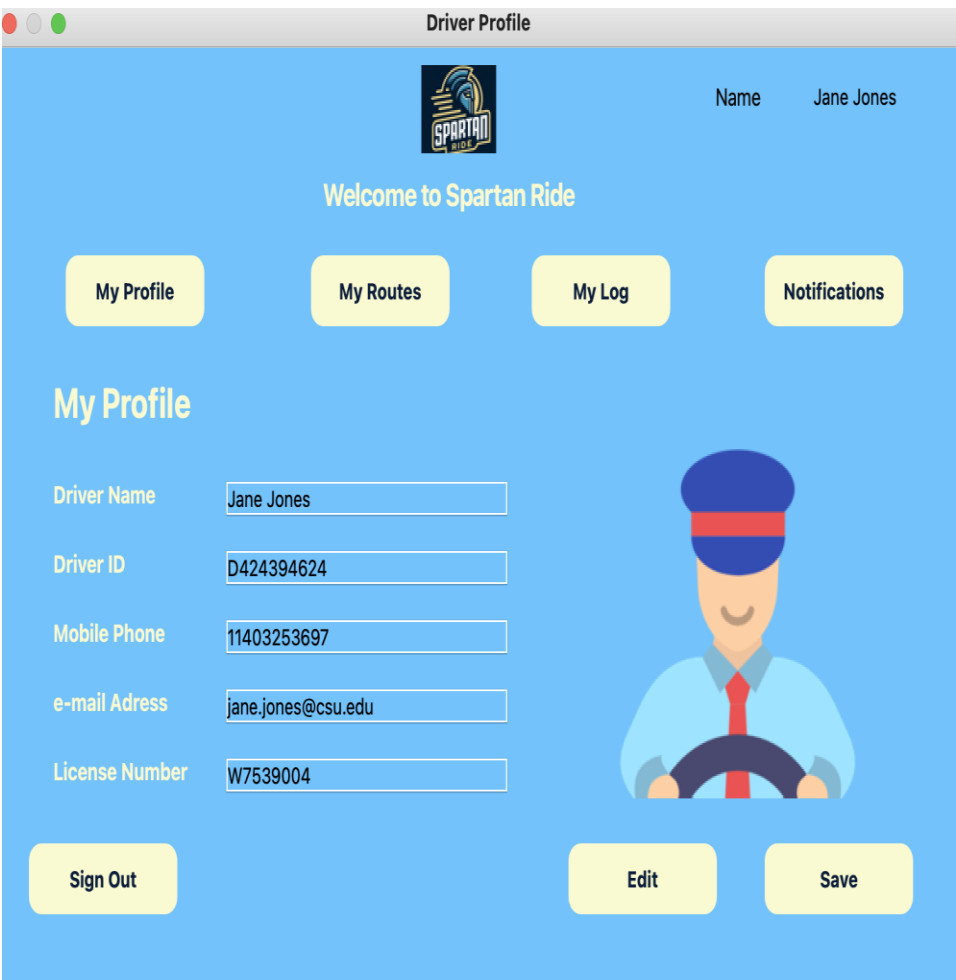
Ride Booking

Interactive map to schedule and track rides easily.



Driver & Admin Views

Route planning for drivers and user control for admins.



About Database:

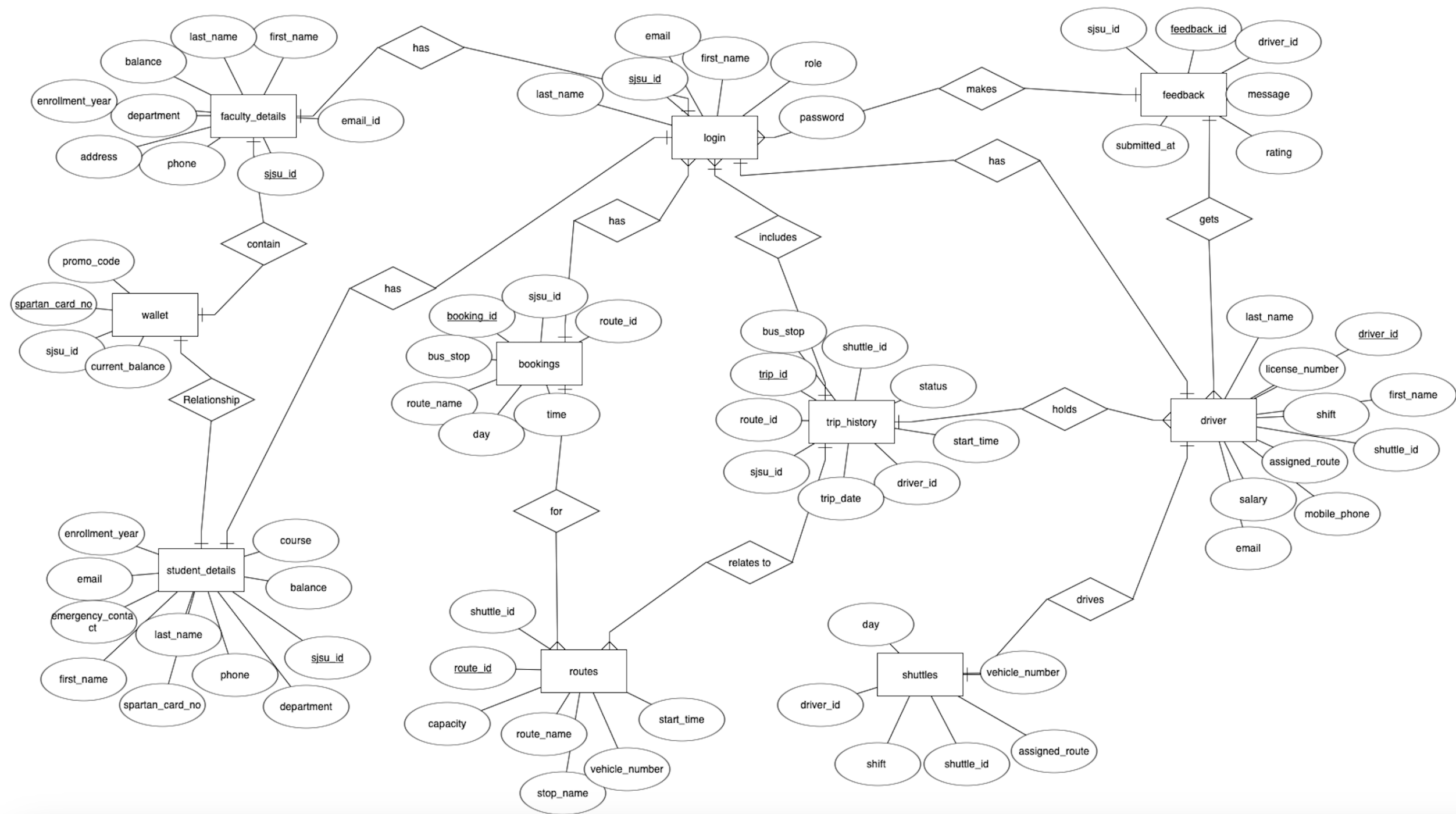
Operational Database:

- Powers the core functionality of the **Spartan Ride** app.
- Manage **ride bookings, shuttle routes, user registrations, and payments**
- Enables students and faculty to **book rides, submit feedback, and view** schedules seamlessly.
- Support drivers and admins in **processing ride requests** and **managing feedback** efficiently.

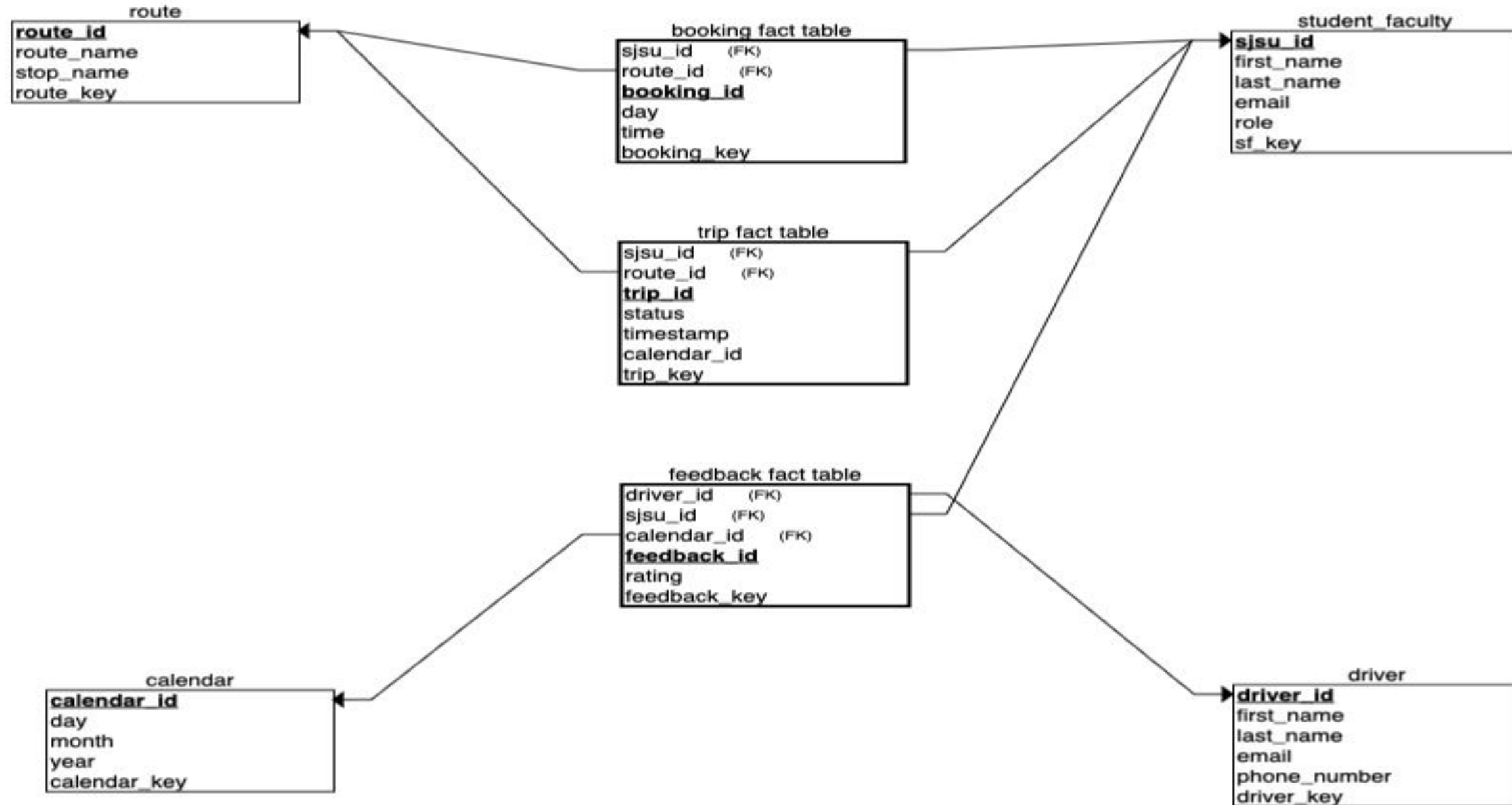
Analytical Database:

- Empowers administrators and university officials with **actionable insights**.
- Tracks **shuttle usage patterns, peak travel hours, and common pickup/drop-off zones**.
- Analyzes trends in **ride demand, feedback ratings, and driver performance** over time.
- Facilitating **data-driven improvements** in route planning, scheduling, and resource allocation to optimize the shuttle service.

ER Diagram



Analytical Database STAR Schema



Implications

Impacts

- **Reduced commute stress** for SJSU students and faculty by offering a direct shuttle solution.
- **Saved time** daily for users previously relying on multi-step public transport (bus → train → walking).
- **Increased safety** with a controlled, campus-only user base and driver verification.
- Promoted a **sense of community** through peer-based ride-sharing among Spartans.
- Laid the groundwork for a **smart, sustainable campus mobility system**.

Future Enhancements

- **Real-time GPS tracking** of shuttles directly in the app.
- **Push notifications** for ride arrival, delays, or cancellations.
- **Automated route optimization** using AI to reduce wait times.
- Expansion to **nearby campuses or partner universities**.

Thank you.