

9. Web Integration :

Web integration for college food services can modernize and streamline the entire dining experience for students, staff, and administrators. Here's a breakdown of what web integration could look like and how you can design it as part of your project.

Web Integration for College Food Services

Purpose:

To enhance the student dining experience with digital tools that offer:

Real-time menus

Feedback collection

Performance tracking

Online payments & pre-booking

Nutritional transplantation

Core Features of a College Food Web System

1. Digital Menu System
2. Daily/weekly menu updated live.

Filters: vegetarian, vegan, allergens, calorie count.

Integration with a CMS (content management system) for kitchen staff to update menus.

2. Feedback & Rating System

Students rate meals (1–5 stars).

Option to submit specific comments or complaints.

Dashboard for admin to view complaints by dish, time, or location.

3. Live Queue & Wait Time Display

Display estimated wait times via RFID-based entry or camera + AI estimation.

Shown on web or mobile.

4. Food Booking or Slot Reservation

Pre-book meals to reduce waste and wait time.

Syncs with student ID or college app.

5. Performance Dashboard (Admin View)

Data from Tableau or embedded Power BI.

KPIs: satisfaction score, number of complaints, food waste, service time, cost efficiency.

6. Nutritional Info Panel

Auto-calculated macros per dish.

Integration with recipe or food database APIs (like Edamam or USDA).

7. Billing & Wallet Integration

Online payment for extras (snacks, special meals).

Wallet integration (like Razorpay, Google Pay, UPI).



Tech Stack Suggestion

Component	Tool/Tech Example
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Frontend	React / Next.js / Vue.js
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Backend	Node.js / Django / Flask
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Database	MySQL / PostgreSQL / Firebase
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Authentication	OAuth / Firebase Auth
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Payment Integration Razorpay / Stripe / UPI

Feedback/Forms Google Forms / Custom API

Analytics Tableau (embedded), Power BI

Hosting Netlify / Vercel / AWS / Azure

✖ Integration with Tableau

If you're using Tableau for your performance testing, here's how you can integrate it into the web:

Use Tableau Public or Server to publish dashboards.

Embed dashboards using an `<iframe>` or Tableau JS API.

Example:

```
<iframe  
src="https://public.tableau.com/views/CollegeFoodDashboard/Overview?:embed=y" width="1000" height="800"></iframe>
```

🔄 Data Flow Diagram (Simplified)

[Student] -- (Menu View / Rating) --> [Frontend Web App]

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[Queue Monitor] --> [Backend Server] --> [Database]

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[Nutrition API / Payment API] ↔ [Admin Dashboard/Tableau]

 Want a Sample Web App?

I can generate a simple React + Tailwind frontend mockup for:

Menu view

Feedback submission

Dashboard preview

Or I can help you design a Figma UI prototype to visualize the flow without code.

What would you prefer:

Code for a sample web integration?

A non-code prototype (Figma)?

An embedded Tableau + menu mockup?
