## Context Diagram (Level 0)

**System**: *College Food Analysis Platform*
**External Entities**:

- **Students**: Input food preferences, dietary needs, feedback.
- **Dining Services**: Upload menus, pricing, nutrition info.
- **Nutrition Experts**: Provide dietary guidelines and survey questions.
- **Researchers/Admin**: Assign surveys, view aggregated reports.

**Data Flows**:

- Students → upload "Food Log"
- Dining → send "Menu & Nutrition Data"
- Experts → config "Diet Guidelines & Surveys"
- Researchers ← receive "Reports & Insights"
- Platform → send "Personalized Recommendations" to students

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## Level 1 DFD – Core Processes & Data Stores

1. **Collect Student Input**
    - Ingest Food Logs, Survey responses
    - **Data store**: Student Food Logs
2. **Import Dining Data**
    - Capture menu items, nutrition, prices
    - **Data store**: Menu Nutrition DB
3. **Analyze & Score Choices**
    - Match logs against diet guidelines
    - Score nutritional profile, spending
    - Output: scored summaries
4. **Generate Visual Insights (Tableau)**
    - Access logs, menus, guidelines
    - Produce dashboards: trends, top-consumers, nutrition gaps
5. **Deliver Personal Recommendations**
    - Use analysis to suggest healthier or budget-smart options

**Data Stores**:

- **Student Food Logs**
- **Menu Nutrition DB**
- **Diet Guidelines**
- **Analysis Results**

**Examples**:

- Process 1 saves logs to Student Food Logs.
- Process 3 reads guidelines and logs, and writes scored summaries.
- Process 4 accesses menu + scores to build Tableau dashboards.

**Mapping**:

- Student logs feed into *Collect Student Input* → stored in Student Food Logs.
- Guidelines flow into *Diet Guidelines* store via Expert input.
- Analysis process uses both to generate scores.
- Tableau pulls from Analysis Results and Menu DB.