**7. Technology Stack**

The following tools and technologies were carefully selected to design, develop, and deploy the *College Food Choices Case Study Visualization Platform*. The goal was to ensure an intuitive, high-performance solution for analyzing and presenting student dietary data.

**7.1 Data Collection & Storage**

| **Tool / Technology** | **Purpose** |
| --- | --- |
| **CSV Files** | Raw data storage format used for dietary and lifestyle data |
| **Excel / Google Sheets** | Initial formatting and exploration of datasets |

**7.2 Data Preparation & Transformation**

| **Tool / Technology** | **Purpose** |
| --- | --- |
| **Tableau Prep** (Optional) | Data cleansing, column filtering, joining multiple tables |
| **Tableau Desktop** | Importing CSV data, building calculated fields, structuring dashboards |

**7.3 Data Visualization**

| **Tool / Technology** | **Purpose** |
| --- | --- |
| **Tableau Desktop** | Core platform for creating interactive visualizations |
| **Tableau Public / Server** | Hosting the dashboards for external access |

**7.4 Web Integration**

| **Tool / Technology** | **Purpose** |
| --- | --- |
| **Python** | Backend scripting and logic |
| **Flask Framework** | Embedding Tableau dashboards in a minimal web UI |
| **HTML / CSS** | Styling and structuring the web interface |

**7.5 Deployment (Optional)**

| **Platform** | **Purpose** |
| --- | --- |
| **Render / Vercel** | Hosting the Flask application online |
| **GitHub** | Version control and source code repository |

**7.6 Supporting Tools**

| **Tool** | **Purpose** |
| --- | --- |
| **VS Code / Jupyter** | Code development and testing environments |
| **Mermaid / draw.io** | Visualizing system architecture and data flow diagrams |
| **OBS / Screen Recorder** | Recording project walkthroughs and demonstrations |