Technical Architecture:

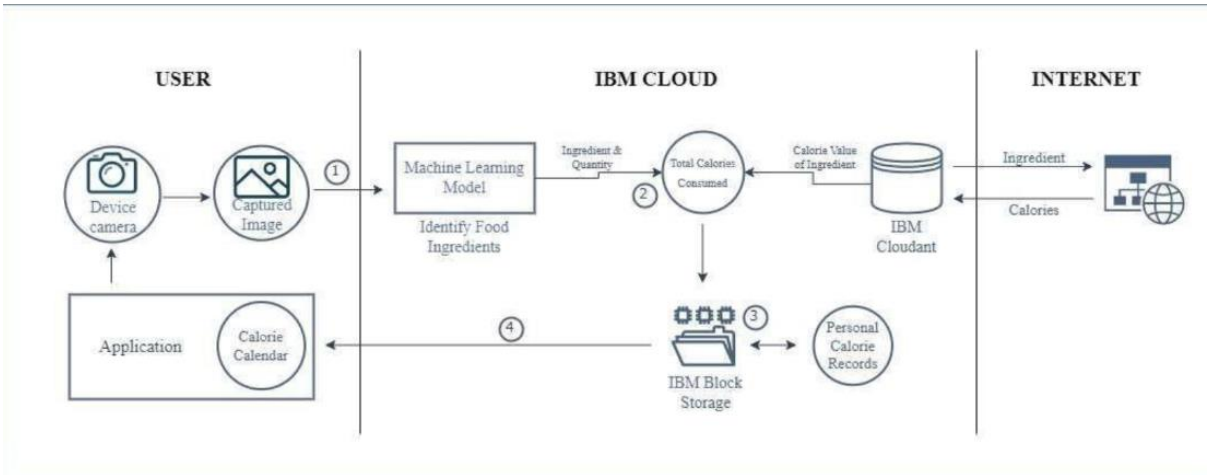

Table-1 : Components & Technologies:

S no	Component	Description	Description
1	User Interface	an app that lets users make profiles, upload photos of the components they use in their food, and obtain a personalized nutrition calendar	HTML, CSS, JavaScript
2	Image Capture	Users are required to take a photo of the ingredient(s) they eat.	IBM Maximo Image Inspection
3	Ingredient Detection Model	The ingredients used must be identified from the captured image.	Machine Learning & Image Processing using Python
4	Calorie Consumption Monitoring	The software monitors the user's daily calorie intake and alerts them when there is an excess.	IBM Push Notifications
5	Database of Ingredients	Ingredient information and the relevant calories are kept on file.	MySQL
6	Cloud Database for Back-up	Here, backup copies of the application's data are kept, and consolidated reports of monthly calendars are also kept.	IBM Cloudant
7	File Storage	A file system is used to keep track of the products consumed each day as well as the daily caloric intake. Additionally, a customized calorie calendar is created using this.	IBM Block Storage
8	Calorie Value Consolidation	To determine the calorie counts of components that	IBM Block Storage

		are saved in the database, a web-scraping API is used.	
9	Machine Learning Model	To detect substances, captured photos are analyzed using machine learning algorithms.	Object Recognition Model to Label Ingredients
10	Infrastructure (Server / Cloud)	The program is deployed to the cloud for use. Configuration of the cloud server:	Cloud Foundry

Table-2: Application Characteristics:

S. No	Characteristics	Description	Technology
1	Open-Source Frameworks	Google Colab, VS Code, Online Websites	Python, HTML, CSS, JavaScript
2	Security Implementations	Email-based data access authentication and text encryption before file storage	SMTP, Encryption Algorithms
3	Scalable Architecture	Applications are updated, bugs are fixed, and new features are added in response to user experience and input.	customer feedback, reviews, andratings
4	Availability	Users should always be able to access the cloud-hosted application, and they shouldn't experience any problems like application crashes.	IBM Cloud

5	Performance	The application should be able to process many requests without sacrificing the speed or quality of the results.	testing - Black, White, and Beta Revise application in spiral model