

Project Design Phase-II Technology Stack (Architecture & Stack)

Technical Architecture:

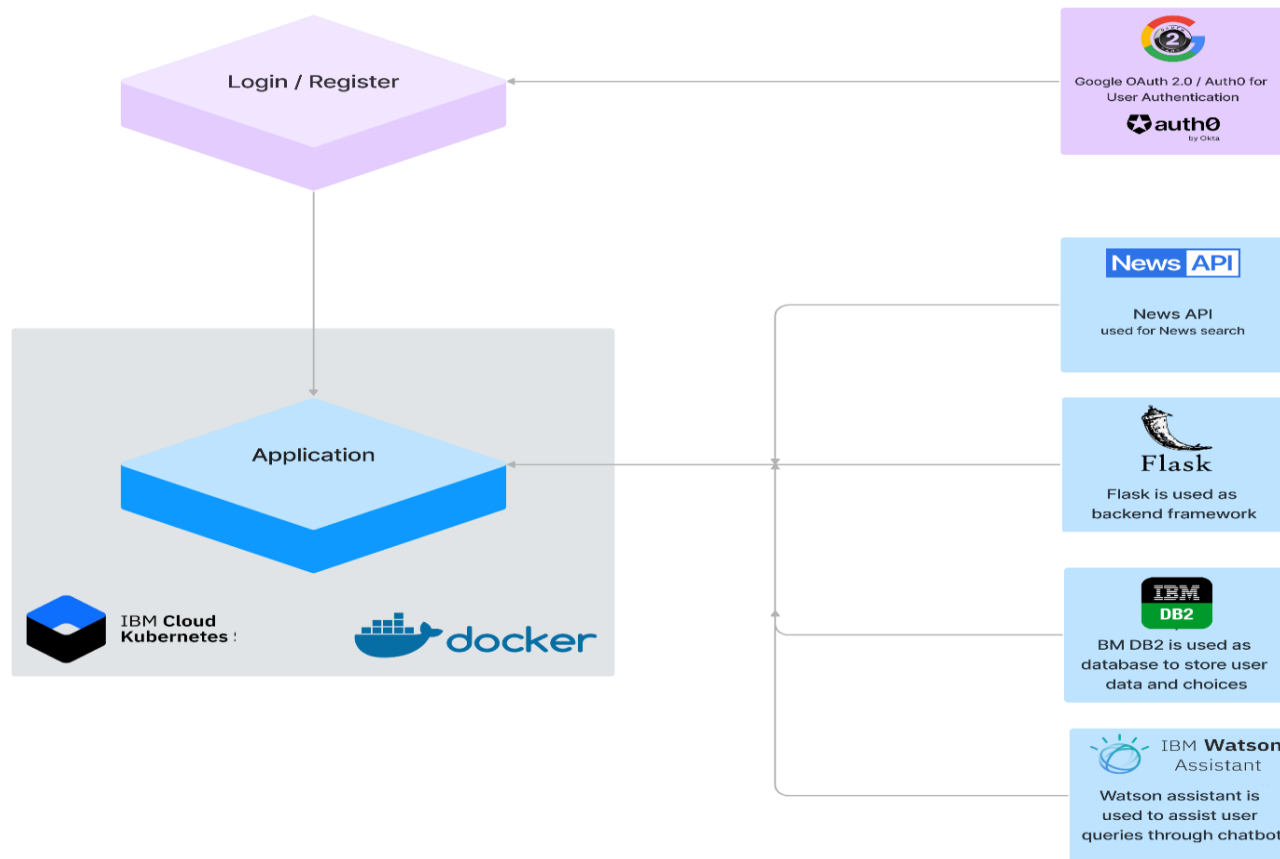


Table-1: Components & Technologies:

S. No	Component	Description	Technology
1.	User Interface	The user can Login / register in the web UI	HTML, CSS, Python, Bootstrap / TailwindCSS
2.	Backend Technology	A framework to support backend work for the application	Python Flask
3.	Chatbot	A chatbot designed to resolve the issues of queries and FAQ	IBM Watson Assistant
4.	Cloud Database	Database Service on Cloud	IBM DB2
5.	NewsAPI	Retrieve all categories of news from API	NewsAPI - Python
6.	Auth0	Authenticate user login	Auth0 - Python
7.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration, Cloud Server Configuration	Cloud Foundry, Kubernetes, Docker.

Table-2: Application Characteristics:

S. No	Characteristics	Description	Technology
1.	Open-Source Frameworks	<ul style="list-style-type: none">• Flask• NewsAPI	Python
2.	Security Implementations	Encryption – Auth0	SHA-256
3.	Scalable Architecture	3 – Tier Architecture, 10,000 users should be able to use the application	IBM Cloud
4.	Availability	The application should be up 99% of the time.	IBM Cloud
5.	Performance	The application should handle 1000 requests per second and 3-4 seconds to load the home page with the news.	IBM Cloud

