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

Date	15 October 2022
Team ID	PNT2022TMID38512
Project Name	Project – Natural disasters intensity analysis and classification using artificial intelligent
Maximum Marks	4 Marks

Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2

Example: Order processing during pandemics for offline mode

Reference: https://developer.ibm.com/patterns/ai-powered-backend-system-for-order-processing-during-pandemics/
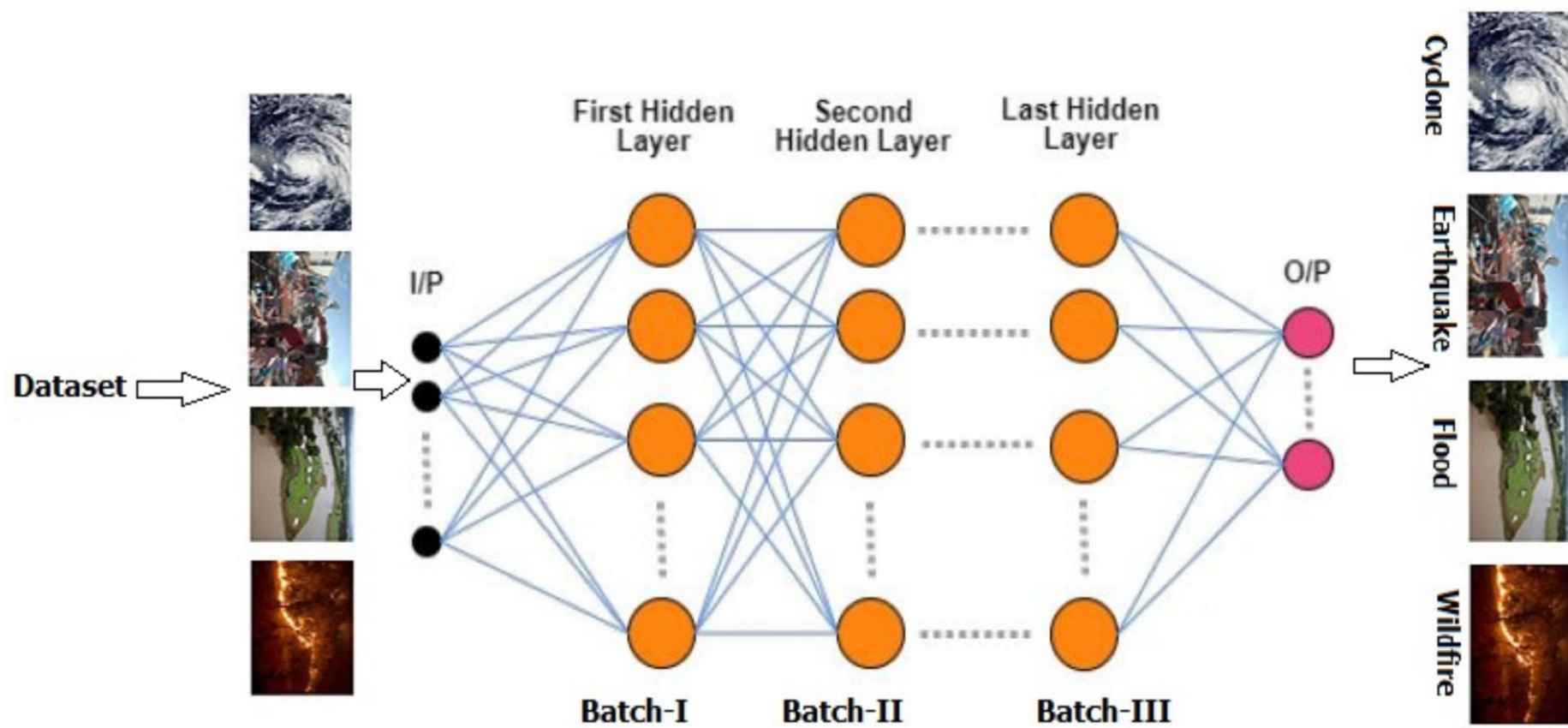
Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application e.g. Web UI, Mobile App, Chatbot etc.	HTML, CSS, JavaScript / Angular Js / React Js etc.
2.	Image preprocessing	Satellite image of the particular area	Python
3.	Predicting the issue	Using various model to predict the issues in that particular area	python
4.	Database	Data is stored as image and dataset	MySQL, NoSQL, etc.
5.	Cloud Database	Database Service on IBM Cloud	IBM DB2, IBM Cloudant etc.
6.	File Storage	File storage as csv files and images	IBM Block Storage or Other Storage Service or Local Filesystem
7.	External API-1	Google , web browsers , or applications	IBM Weather API, etc.
8.	External API-2	For knowing the current issue or problem in that particular area	Like weather live ,weather forecast etc.
9.	Machine Learning Model	Machine Learning Model for processing the image and data	Object Recognition Model, etc.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Anaconda navigator , jupyter ,spyder , python	Google
2.	Security Implementations	The client is the user and the server is IBM	e.g. SHA-256, Encryptions, IAM Controls, OWASP etc.
3.	Scalable Architecture	It must handle all workloads without any consequences	IBM cloud
4.	Availability	Availability of application for all users	IBM cloud
5.	Performance	Application should perform correctly	IBM cloud

References:

https://c4model.com/

https://developer.ibm.com/patterns/online-order-processing-system-during-pandemic/

https://www.ibm.com/cloud/architecture

https://aws.amazon.com/architecture

https://medium.com/the-internal-startup/how-to-draw-useful-technical-architecture-diagrams-2d20c9fda90d