Project Design Phase-I
Proposed Solution Template

Date	30 September 2023
Team ID	Team-592170
Project Name	Alzheimer Disease Prediction
Maximum Marks	2 Marks

Proposed Solution Template:

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Early Detection Model for Persons With Probable Alzheimer's disease Using Deep learning algorithm Alzheimer's disease (AD) is a prevalent and irreversible neurological condition marked by progressive cognitive decline. Over time, patients experience memory loss and deteriorating thinking abilities. Deep learning algorithms, such as convolutional neural networks (CNNs) and recurrent neural networks (RNNs), have been employed to analyze various types of data, including neuroimaging, genetic markers, and clinical data, to detect patterns indicative of Alzheimer's disease.
2.	Idea / Solution description	To identify or detect the early stages of memory loss in people , we train the model using deep learning algorithm i.e. RESNET-50 Using ResNet-50 for Alzheimer's disease detection leverages the model's deep learning capabilities to automatically recognize subtle patterns associated with the disease, potentially enabling early diagnosis and intervention, which is crucial in the effective management of Alzheimer's disease. This approach has the potential to assist healthcare professionals in making more accurate and timely diagnoses, ultimately improving patient outcomes and quality of care.
3.	Novelty / Uniqueness	Some of the key aspects that make ResNet-50 unique: • Deep residual blocks • Pre-training on large datasets • Architecture Depth with 50 layers • Strong feature extraction • To achieve high accuracy and generalization on a wide range of image recognition and classification tasks

4.	Social Impact / Customer Satisfaction	The model's predictions can assist in early diagnosis, offering the potential for better patient outcomes and personalized care plans, ultimately improving Alzheimer's disease management. Cost savings in healthcare, better access to services, and hope for effective treatments contribute to overall satisfaction, making early detection a crucial element in Alzheimer's care. By leveraging deep learning algorithms, researchers and healthcare professionals can gain deeper insights into the disease, enhance early detection, and develop more effective therapeutic interventions.
5.	Business Model (Revenue Model)	Creating a business model or revenue strategy for Alzheimer's disease detection entails providing a valuable service or product associated with the identification, diagnosis, or care of this condition. This can include diagnostic services, data analysis, software licenses, educational programs, and more, depending on the specific offerings and target market.
6.	Scalability of the Solution	ResNet-50's scalability is ideal for processing large medical image datasets, addressing the growing availability of medical data. It can efficiently handle an extensive volume of images, critical for accurate diagnosis in Alzheimer's and adapting to the increasing data resources. It also supports continuous patient monitoring, vital for tracking Alzheimer's disease progression and treatment effectiveness over time. It allows healthcare providers to make timely adjustments to care plans. Furthermore, this scalability extends to real-time applications, making ResNet-50 a valuable tool for swift and efficient Alzheimer's disease detection within clinical settings.