Project Initialization and Planning Phase

Date	19th July 2024
Team ID	SWTID1720627211
Project Title	Cognitive Care: Early Intervention For Alzheimer's Disease
Maximum Marks	3 Marks

Project Proposal

Alzheimer's Disease (AD) is a debilitating neurodegenerative condition marked by progressive cognitive decline, memory impairment, and challenges in daily functioning. Timely intervention can play a crucial role in slowing the advancement of AD, helping to maintain cognitive abilities and enhance overall quality of life. This initiative, "Proactive Approaches to Alzheimer's Disease Management," seeks to create a robust framework for facilitating early detection and intervention. By integrating innovative technology, educational outreach, and tailored care strategies, the project aims to empower individuals and families affected by AD to navigate the disease more effectively.

Project Overview	
Objective	Early Diagnosis, Awareness, Personalized Care Plans, Support Services, Monitoring and Feedback
Scope	The project aims to create a comprehensive framework that includes digital resources, educational content, and customized care plans specifically designed for the early intervention of Alzheimer's Disease. It will leverage technology to provide accessible information and support, while intentionally excluding direct medical treatment and in-person services. This approach ensures that individuals and families can engage with valuable resources remotely, fostering awareness and proactive management of the disease.
Problem Statement	
Description	The project tackles the critical gap in early identification and tailored intervention for Alzheimer's Disease, aiming to enhance patient outcomes and overall quality of life. By focusing on proactive measures and personalized strategies, it seeks to empower individuals and their families in managing the challenges associated with the disease effectively.

Impact	Tackling this challenge could greatly slow the advancement of the disease, safeguard cognitive abilities, and improve the overall quality of life for individuals living with Alzheimer's Disease.
Proposed Solution	
Approach	Adopt agile development methodologies for the continuous refinement of online tools, educational resources, personalized care plans, integration of support services, and monitoring systems, in partnership with stakeholders and healthcare experts.
Key Features	The proposed solution uniquely integrates advanced technology with personalized care plans and community engagement to enhance early intervention and support for Alzheimer's Disease.

Resource Requirements

Resource Type	**Description**	**Specification/Allocation**
Hardware		
Computing Resources	CPU/GPU specifications, number of cores	T4 GPU
Memory	RAM specifications	8 GB
Storage	Disk space for data, models, and logs	500 GB SSD
Software		
Frameworks	Python frameworks	Flask, Django, Pandas, numpy,
Libraries	Additional libraries	Tensorflow, Scikit-learn
Development Environment	IDE, version control	Jupyter Notebook, Git, Google Collab,Spyder
Data		
Data	Source, size, format	Kaggle dataset, 6400 images