Data description:

The ADNI dataset for this miniproject contains 1851 observations (representing various measures for each participant), 49 input variables and one output variable.

The output variable ‘DIAGNOSIS’ contains classes: Cognitive Normal (CN), Mild Cognitive Impairment (MCI) and Dementia. The input variables are related to the following:

· Demographics: age, gender, ethnicity, race, marital status and education level.

· Functional Activities Questionnaire (FAQ) is a test that can be used to assess the participant’s dependency on another person to carry out normal daily tasks. FAQ is a questionnaire that contains multiple choice questions and yields a resulting integer score between 0 and 30.

· Mini-Mental State Exam (MMSE) is used to estimate the severity and progression of cognitive impairment and to monitor its progression in a participant.

· PET measurements (FDG, PIB, AV45) are measurements of a participant’s brain functionality.

· MRI measurements (Hippocampus, intracranial volume (ICV), MidTemp, Fusiform, Ventricles, Entorhinal and WholeBrain) are structural measurements of a participant’s brain.

· APOE4 is an integer measurement representing the appearance of epsilon 4 allele on the Apolipoprotein E (APOE) gene.

· ABETA, TAU, PTAU are variables that measure the cerebrospinal fluid (CSF) of a patient.

· Rey’s Auditory Verbal Learning Test (RAVLT) are neurophysiological tests evaluating the patient’s episodic memory.

· Everyday cognitive evaluations (Ecog) are questionnaires that illustrate a person’s ability to carry out everyday tasks. This includes the participants evaluation of themselves, as well as a third-party spectator’s evaluation.

· Logical Memory – Delayed Recall Total Number of Story Units Recalled (LDELTOTAL) is a neuropsychological test that evaluates a person’s ability to recall information after a prescribed amount of time.

· Modified Preclinical Alzheimer Cognitive Composite (mPACC) are multiple tests that evaluate a participant’s cognition, episodic memory and time executive functionality.

· ADAS and MOCA are generalized neuropsychological tests that evaluates a person’s cognitive ability in focuses such as: memory, visuospatial and more).