ALZHEIMER'S MACHINE LEARNING PREDICTION

Alzheimer's disease is a degenerative neurologic condition which results in the death of brain cells and brain shrinkage. The most frequent cause of dementia, Alzheimer's disease affects mostly older persons and is characterized by a steady deterioration in mental, behavioral, and social abilities that impairs a person's capacity for independent functioning.

Memory loss is the earliest clinical sign of AD. Early warning indications include having trouble recalling previous conversations or occurrences. There is currently no cure for the disease, which causes memory problems to get worse and other symptoms to appear as it advances. For the examination of patients with probable AD, magnetic resonance imaging (MRI) of the brain is used. It is unclear what causes Alzheimer's disease exactly. But on a fundamental level, brain proteins malfunction, which interferes with the operation of brain cells (neurons) and sets off a chain of harmful events. Damaged neurons lose their connections to one another and finally die.

The 150 participants in this group, who range in age from 60 to 96, are collected longitudinally. A total of 373 imaging sessions were performed on each patient over the course of at least two visits separated by at least a year. Three or four distinct T1-weighted MRI scans performed in a single scan session are presented for each subject. Men and women, both right-handed, are represented among the subjects. Throughout the entire trial, 72 of the individuals were classified as nondemented. 51 people with mild to moderate Alzheimer's disease were among the 64 subjects who were classified as demented at the time of their initial visits and remained so for successive scans. At the time of their initial visit, another 14 participants were classified as not having dementia; however, they were later classified as having dementia.

Feature	Description
1. ID	Identification
2. Group	Demented, Nondemented and Converted
3. Visit	The visit number
4. M/F	Gender
5. Hand	Dominant Hand
6. Age	Age in years
7. EDUC	Years of Education
8. SES	Socioeconomic status
9. MMSE	Mini Mental State Examination
10. CDR	Clinical Dementia Rating
11. eTIV	Estimated Total Intracranial Volume
12. nWBV	Normalize Whole Brain volume
13. ASF	Atlas scaling Factor