

Alzheimer's Analysis

Sneha Jacob, Alina Bangash, Jeremy Udo, Sana Akhtar, Jake Schwartz

Introduction

Our team decided to analyze the Alzheimer's Disease dataset created by Rabei El Kharoua on Kaggle. We decided to proceed with this topic since Alzheimer's is a very common illness without a cure that affects millions of people both directly and indirectly. This data set includes data from 2,149 patients and has 34 variables.

Main Question:

Through this analysis we wanted to answer the question: Which factors are strongly associated with the diagnosis of Alzheimer's Disease?

Dataset Information:

- Age: age of patients (60-90 years)
- Gender: 0 if male or 1 if female
- Ethnicity: 0 - Caucasian, 1 - African American, 2 - Asian, 3 - other
- Education Level: 0 - None, 1 - High School, 2 - Bachelors, 3 - Higher
- BMI: Body Mass Index (15 - 40)
- Smoking: 0 - No, 1 - Yes
- Physical Activity: Weekly physical activity (0 - 10 hrs)
- DietQuality: Diet quality score (0 -10)
- SleepQuality: Sleep quality score (4 - 10)
- Health History Variables (Categorical: 0 - No, 1 - Yes): - FamilyHistoryAlzheimers - CardiovascularDisease - Diabetes - Depression - HeadInjury - Hypertension
- MMSE: Mini-Mental State Examination score (0 -30); lower score indicates cognitive impairment
- FunctionalAssessment: (0 -10); lower score indicates greater impairment
- MemoryComplaints: 0 - No, 1- Yes
- BehavioralProblems: 0 - No, 1 - Yes
- ADL: Activities of Daily Living score, (0 -10); lower score indicates greater impairment
- Symptom Variables (Categorical: 0 - No, 1 - Yes):
 - Confusion
 - Disorientation
 - PersonalityChanges
 - DifficultyCompletingTasks
 - Forgetfulness
- Diagnosis: Diagnosis Status for Alzheimer's Disease; 0 - No, 1 - Yes