Table 1.

	Group Member	Department	Semester	Number
1	Akram Mustafa	Computer Engineering	2018-2019 Spring	150116905
2	Ayça Deniz	Bioengineering	2018-2019 Spring	150814005
3	Berfin Kübra Binay	Bioengineering	2018-2019 Spring	150814037
4	Oğuzhan Bölükbaş	Computer Engineering	2018-2019 Spring	150114022
5	Onur Bayraktar	Computer Engineering	2018-2019 Spring	150114079

Alzheimer is a neurodegenerative disease can be described mainly a memory loss. İts affecting thousands of people day by day. In our research by using mathematical tools and software programs (MATLAB), gene expressions can be investigated for early diagnosis and treatment of Alzheimer. According to literature research, we found most suitable database from article named as “Detection of Alzheimer's disease at mild cognitive impairment and disease progression using autoantibodies as blood-based biomarkers”. In this research, 50 Alzheimer's disease driven mild cognitive impairment samples and 50 control human serum samples were probed onto human protein microarrays in order to identify differentially expressed autoantibodies. By using this research’s database; AD, MCI, MS and PD were made comparable at the level of gene expression.

These diseases include different amount of patients.

- Control: 50
- Alzheimer Disease (AD): 50
- Mild Cognitive Impairment(MCI): 50
- Parkinson Disease (PD): 25
- Multiple Sclerosis (MS):25

Table 2.

	Feature Name	Description	Type	Target
1	Alzheimer Disease	Neurodegenerative Disease	Numeric	✓
2	Parkinson Disease	Neurodegenerative Disease	Numeric	✓
3	Mild Cognitive Impairment	Neurodegenerative Disease	Numeric	✓
4	Multiple Sclerosis	Neurodegenerative Disease	Numeric	✓
5	Control	Samples from healthy people	Numeric	✓

Table 3.

	Class Value	# of instances	Percentage
1	Positive	50	50%
	Negative	50	50%
2	Positive	50	66,7%
	Negative	25	33,3%
3	Positive	50	50%
	Negative	50	50%
4	Positive	50	66,7%
	Negative	25	33,3%
5	Positive	50	50%
	Negative	50	50%