MA4022/ MA7522 Data Mining and Neural Networks

Computational Task 1

Due till 09.02.2016

Prediction of USA presidential elections on the base of the following questionnaire and data.

P-party is the presidential party, p-1,..., p18 are victories of the presidential party and o1,...,o13 are victories of the opposition.

- 1) Has the P-party been in power for more than one term?,
- 2) Did the P-party receive more than 50% of the popular vote in the last election?,
- 3) Was there significant activity of a third party during the election year?,
- 4) Was there serious competition in the P-party primaries?,
- 5) Was the P-party candidate the president at the time of the election?,
- 6) Was there a depression or recession in the election year?,
- 7) Was there a growth in the gross national product of more than 2.1% in the year of the election?,
- 8) Did the P-party president make any substantial political changes during his term?,
- 9) Did significant social tension exist during the term of the P-party?,
- 10) Was the P-party administration guilty of any serious mistakes or scandals?,
- 11) Was the P-party candidate a national hero?,
- 12) Was the O-party candidate a national hero?,

P-PARTY VICTORIES

Election		Answers			to	Questions							
Number	Year	1	2	3	4	5	6	7	8	9	10	11	12
p-1	1864	n	n	n	n	У	n	n	У	У	n	n	n
p-3	1872	У	У	n	n	У	n	У	n	n	n	У	n
p-4	1880	У	n	n	У	n	n	У	У	n	n	n	n
p-5	1888	n	n	n	n	У	n	n	n	n	n	n	n
p-6	1900	n	У	n	n	У	n	У	n	n	n	n	У
p-7	1904	У	У	n	n	У	n	n	n	n	n	У	n
p-8	1908	У	У	n	n	n	n	n	У	n	n	n	У
p-9	1916	n	n	n	n	У	n	n	У	n	n	n	n
p-10	1924	n	У	У	n	У	n	У	У	n	У	n	n
p-11	1928	У	У	n	n	n	n	У	n	n	n	n	n
p-12	1936	n	У	n	n	У	У	У	У	n	n	У	n
p-13	1940	У	У	n	n	У	У	У	У	n	n	У	n
p-14	1944	У	У	n	n	У	n	У	У	n	n	У	n
p-15	1948	У	У	У	n	У	n	n	У	n	n	n	n
p-16	1956	n	У	n	n	У	n	n	n	n	n	У	n
p-17	1964	n	n	n	n	У	n	У	n	n	n	n	n
p-18	1972	n	n	n	n	У	n	У	У	У	n	n	n

O-PARTY VICTORIES

Election	Answe												
Number	Year	1	2	3	4	5	6	7	8	9	10	11	12
0-1	1860	У	n	У	У	n	n	У	n	У	n	n	n
0-2	1876	У	У	n	У	n	У	n	n	n	У	n	n
0-3	1884	У	n	n	У	n	n	У	n	У	n	У	n
0-4	1892	n	n	У	n	У	n	n	У	У	n	n	У
0-5	1896	n	n	n	У	n	У	n	У	У	n	У	n
0-6	1912	У	У	У	У	У	n	У	n	n	n	n	n
0-7	1920	У	n	n	У	n	n	n	У	У	n	n	n
0-8	1932	У	У	n	n	У	У	n	n	У	n	n	У
0-9	1952	У	n	n	У	n	n	У	n	n	У	n	У
0-10	1960	У	У	n	n	n	У	n	n	n	n	n	У
0-11	1968	У	У	У	У	n	n	У	У	У	n	n	n
0-12	1976	У	У	n	У	У	n	n	n	n	У	n	n
0-13	1980	n	n	У	У	У	У	n	n	n	У	n	У

- 1. Try to predict the result using one question. How many wrong predictions produced each question? Which question gives the best result? (20 marks from 100)
- 2. Try to combine the best question with another question. There are 11 possibilities for a given best question. The two questions can produce four combinations of answers (yy, yn, ny, nn). For each combination select the predicted outcome. How many wrong prediction gives the selected pair of questions? Which pair (of 11) gives the best result? (30 marks from 100)
- 3. Try to combine the best couple of questions with a third question (10 possibilities). There are eight combinations of answers. For each combination select the predicted outcome. How many wrong prediction gives the selected triple of questions? Which triple (of 10) gives the best result? (30 marks from 100)
- 4. Write a report with pictures and tables. (20 marks from 100 for the quality of the report)

Expected volume of the report is 4-7 pages.