

Prompt Engineering Problem Set #1

You are required to use Meta Llama 3 8B model for the exercises below. Load the model as a server and issue the prompts from the client.

- (a) Following is the list of party names and votes polled by them in a parliamentary constituency (that has several assembly segments). Determine which party won this election, who is the runner up and what is the victory margin against the runner up.

TDP	54056
BJP	1753
YSRCP	69588
INC	1327
JnP	2987
JAJGP	203
IND	568
IND	418
IND	743
IND	636
TDP	51399
BJP	3273
YSRCP	71694
INC	1954
JnP	5391
JAJGP	469
IND	1082
IND	886
IND	1127
IND	793
TDP	57159
BJP	1474

YSRCP	68836
INC	1362
JnP	4995
JAJGP	189
IND	530
IND	390
IND	664
IND	386
TDP	59128
BJP	1684
YSRCP	76281
INC	1730
JnP	3349
JAJGP	261
IND	755
IND	483
IND	1154
IND	707
TDP	23849
BJP	3354
YSRCP	83652
INC	3599
JnP	8761
JAJGP	2034
IND	3902
IND	6430
IND	3157
IND	2653
TDP	27101
BJP	3629
YSRCP	82473

INC	4151
JnP	4637
JAJGP	807
IND	1964
IND	1748
IND	2163
IND	1528
TDP	63471
BJP	2411
YSRCP	105037
INC	3533
JnP	12125
JAJGP	742
IND	1410
IND	3455
IND	2223
IND	1160

(b) Repeat the problem as above for the data for a different constituency as below:

TDP	83375
INC	2370
YSRCP	69572
BJP	1609
PPOI	316
JnP	9347
IND	910
IND	858
IND	661
TDP	70050
INC	1650
YSRCP	66319
BJP	975
PPOI	157
JnP	5338
IND	575
IND	662

IND	448
TDP	86897
INC	1308
YSRCP	78289
BJP	754
PPOI	180
JnP	2163
IND	634
IND	931
IND	513
TDP	65828
INC	1616
YSRCP	72134
BJP	1159
PPOI	242
JnP	4047
IND	776
IND	791
IND	741
TDP	86800
INC	2007
YSRCP	77144
BJP	1387
PPOI	224
JnP	5737
IND	675
IND	614
IND	516
TDP	63490
INC	1256
YSRCP	75759
BJP	692
PPOI	142
JnP	2611
IND	517
IND	538
IND	343
TDP	72773
INC	3249
YSRCP	81714
BJP	781
PPOI	180
JnP	2076
IND	742
IND	757
IND	592

(c) Repeat the same problem for the data below:

TDP	81865
INC	2136
YSRCP	96447
BJP	830
SAPRP	771
ACP	269
JnP	4534
JAJGP	112
PPOI	130
IND	158
IND	214
IND	312
IND	1351
IND	1123
TDP	70709
INC	1901
YSRCP	77231
BJP	798
SAPRP	653
ACP	170
JnP	4491
JAJGP	109
PPOI	121
IND	169
IND	161
IND	192
IND	444
IND	981
TDP	77990
INC	1997

YSRCP 82816

BJP 1081

SAPRP 1172

ACP 225

JnP 4249

JAJGP 126

PPOI 138

IND 177

IND 201

IND 210

IND 404

IND 806

TDP 64250

INC 2438

YSRCP 87430

BJP 849

SAPRP 713

ACP 179

JnP 3442

JAJGP 124

PPOI 100

IND 136

IND 151

IND 213

IND 924

IND 909

TDP 71872

INC 2710

YSRCP 82956

BJP 801

SAPRP 645

ACP	151
JnP	3627
JAJGP	111
PPOI	148
IND	150
IND	214
IND	178
IND	501
IND	1100
TDP	72449
INC	2707
YSRCP	85233
BJP	657
SAPRP	624
ACP	169
JnP	6426
JAJGP	118
PPOI	97
IND	140
IND	159
IND	201
IND	529
IND	1020
TDP	88172
INC	1718
YSRCP	61353
BJP	1886
SAPRP	403
ACP	98
JnP	7010
JAJGP	87

PPOI	88
IND	80
IND	72
IND	155
IND	397
IND	397

- (d) Using the data provided in (a) to (c) compare the performance of INC and BJP along: total votes polled in each of the constituencies and respective votes percentage and also aggregated votes % across all the three constituencies.
- (e) Ignore data on independents (IND) in problems (a) to (c). Provide the output for (a) to (c) in JSON format. Note that the structure is:
Parliamentary_Constituency -> Assembly_Constituency -> Party -> votes_polled.
- (f) Write a function to compute the total number of tokens consumed and emitted by the LLM, so that we can find out the token budget for each of these outputs.