

```
1 C:\Users\lcalderon\Miniconda3\envs\py36\python.exe "C
 :/Users/lcalderon/OneDrive - ENDAVA/Documents/GitHub/
 0123/Machine Learning/Census/census4.py"
2 Cost after 0 iterations: 0.6532601570045303
3 Cost after 100 iterations: 0.5469140515023321
4 Cost after 200 iterations: 0.5454246794517635
5 Cost after 300 iterations: 0.5439038025680533
6 Cost after 400 iterations: 0.5423336438781965
7 Cost after 500 iterations: 0.5406973504593173
8 Cost after 600 iterations: 0.5389788421845917
9 Cost after 700 iterations: 0.5371627922594931
10 Cost after 800 iterations: 0.5352347357842802
11 Cost after 900 iterations: 0.5331813055515168
12 Cost after 1000 iterations: 0.5309905936444066
13 Cost after 1100 iterations: 0.5286526328511929
14 Cost after 1200 iterations: 0.5261599828912279
15 Cost after 1300 iterations: 0.5235083923357001
16 Cost after 1400 iterations: 0.5206974877128159
17 Cost after 1500 iterations: 0.517731417779933
18 Cost after 1600 iterations: 0.5146193570297038
19 Cost after 1700 iterations: 0.5113757552514991
20 Cost after 1800 iterations: 0.5080202193099452
21 Cost after 1900 iterations: 0.5045769392027808
22 Cost after 2000 iterations: 0.5010736280209124
23 Cost after 2100 iterations: 0.4975400295785762
24 Cost after 2200 iterations: 0.49400614050074176
25 Cost after 2300 iterations: 0.4905003685198948
26 Cost after 2400 iterations: 0.48704787913039016
27 Cost after 2500 iterations: 0.4836693544617292
28 Cost after 2600 iterations: 0.48038030727967096
29 Cost after 2700 iterations: 0.4771909839419543
30 Cost after 2800 iterations: 0.47410678544310375
31 Cost after 2900 iterations: 0.47112906239262803
32 Cost after 3000 iterations: 0.46825611022569885
33 Cost after 3100 iterations: 0.4654842017037592
34 Cost after 3200 iterations: 0.46280853108137937
35 Cost after 3300 iterations: 0.46022399181834395
36 Cost after 3400 iterations: 0.45772575427448065
37 Cost after 3500 iterations: 0.4553096440351382
38 Cost after 3600 iterations: 0.4529723433009355
39 Cost after 3700 iterations: 0.4507114485691317
40 Cost after 3800 iterations: 0.44852542061967865
41 Cost after 3900 iterations: 0.4464134607097233
42 Cost after 4000 iterations: 0.4443753423703312
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44	Cost after 4200 iterations:	0.44052145389209085
45	Cost after 4300 iterations:	0.438706404339358
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47	Cost after 4500 iterations:	0.43530114201181397
48	Cost after 4600 iterations:	0.43371053636084145
49	Cost after 4700 iterations:	0.4321937229161095
50	Cost after 4800 iterations:	0.4307495140996264
51	Cost after 4900 iterations:	0.42937631233613427
52	Cost after 5000 iterations:	0.4280721433199756
53	Cost after 5100 iterations:	0.4268347071233253
54	Cost after 5200 iterations:	0.42566144067528394
55	Cost after 5300 iterations:	0.42454958546580734
56	Cost after 5400 iterations:	0.42349625512098876
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412	Cost after 41000 iterations:	0.34396910634075906
413	Cost after 41100 iterations:	0.3438972685410284
414	Cost after 41200 iterations:	0.3438255721830593
415	Cost after 41300 iterations:	0.34375402594760635
416	Cost after 41400 iterations:	0.34368263840232144
417	Cost after 41500 iterations:	0.34361141798447026
418	Cost after 41600 iterations:	0.3435403729846986
419	Cost after 41700 iterations:	0.3434695115318979
420	Cost after 41800 iterations:	0.34339884157920725
421	Cost after 41900 iterations:	0.34332837089117857
422	Cost after 42000 iterations:	0.3432581070321229
423	Cost after 42100 iterations:	0.3431880573556443
424	Cost after 42200 iterations:	0.34311822899536043
425	Cost after 42300 iterations:	0.3430486288567974
426	Cost after 42400 iterations:	0.3429792636104403
427	Cost after 42500 iterations:	0.34291013968591366
428	Cost after 42600 iterations:	0.34284126326725634
429	Cost after 42700 iterations:	0.34277264028925364
430	Cost after 42800 iterations:	0.34270427643477896
431	Cost after 42900 iterations:	0.34263617713309996
432	Cost after 43000 iterations:	0.3425683475590911
433	Cost after 43100 iterations:	0.3425007926333023
434	Cost after 43200 iterations:	0.3424335170228226
435	Cost after 43300 iterations:	0.3423665251428808
436	Cost after 43400 iterations:	0.34229982115912355
437	Cost after 43500 iterations:	0.342233408990512
438	Cost after 43600 iterations:	0.34216729231277476

439	Cost after 43700 iterations:	0.34210147456236384
440	Cost after 43800 iterations:	0.3420359589408517
441	Cost after 43900 iterations:	0.3419707484197188
442	Cost after 44000 iterations:	0.34190584574547644
443	Cost after 44100 iterations:	0.3418412534450756
444	Cost after 44200 iterations:	0.3417769738315544
445	Cost after 44300 iterations:	0.3417130090098797
446	Cost after 44400 iterations:	0.3416493608829404
447	Cost after 44500 iterations:	0.34158603115765457
448	Cost after 44600 iterations:	0.34152302135115536
449	Cost after 44700 iterations:	0.3414603327970209
450	Cost after 44800 iterations:	0.34139796665152217
451	Cost after 44900 iterations:	0.3413359238998587
452	Cost after 45000 iterations:	0.3412742053623618
453	Cost after 45100 iterations:	0.34121281170064127
454	Cost after 45200 iterations:	0.34115174342365995
455	Cost after 45300 iterations:	0.34109100089371774
456	Cost after 45400 iterations:	0.34103058433233413
457	Cost after 45500 iterations:	0.34097049382601524
458	Cost after 45600 iterations:	0.3409107293318982
459	Cost after 45700 iterations:	0.3408512906832634
460	Cost after 45800 iterations:	0.34079217759491026
461	Cost after 45900 iterations:	0.34073338966839123
462	Cost after 46000 iterations:	0.34067492639710056
463	Cost after 46100 iterations:	0.3406167871712173
464	Cost after 46200 iterations:	0.3405589712825008
465	Cost after 46300 iterations:	0.34050147792893903
466	Cost after 46400 iterations:	0.34044430621925004
467	Cost after 46500 iterations:	0.34038745517724
468	Cost after 46600 iterations:	0.34033092374601803
469	Cost after 46700 iterations:	0.34027471079207133
470	Cost after 46800 iterations:	0.34021881510920404
471	Cost after 46900 iterations:	0.3401632354223423
472	Cost after 47000 iterations:	0.3401079703912101
473	Cost after 47100 iterations:	0.34005301861387865
474	Cost after 47200 iterations:	0.33999837863019433
475	Cost after 47300 iterations:	0.3399440489250871
476	Cost after 47400 iterations:	0.3398900279317666
477	Cost after 47500 iterations:	0.33983631403480546
478	Cost after 47600 iterations:	0.3397829055731183
479	Cost after 47700 iterations:	0.3397298008428361
480	Cost after 47800 iterations:	0.3396769981000824
481	Cost after 47900 iterations:	0.3396244955636529
482	Cost after 48000 iterations:	0.33957229141760353

```
483 Cost after 48100 iterations: 0.3395203838137488
484 Cost after 48200 iterations: 0.3394687708740742
485 Cost after 48300 iterations: 0.3394174506930652
486 Cost after 48400 iterations: 0.3393664213399566
487 Cost after 48500 iterations: 0.3393156808609025
488 Cost after 48600 iterations: 0.3392652272810732
489 Cost after 48700 iterations: 0.33921505860667656
490 Cost after 48800 iterations: 0.3391651728269104
491 Cost after 48900 iterations: 0.3391155679158452
492 Cost after 49000 iterations: 0.33906624183424
493 Cost after 49100 iterations: 0.33901719253129314
494 Cost after 49200 iterations: 0.3389684179463301
495 Cost after 49300 iterations: 0.33891991601042903
496 Cost after 49400 iterations: 0.3388716846479859
497 Cost after 49500 iterations: 0.3388237217782218
498 Cost after 49600 iterations: 0.3387760253166312
499 Cost after 49700 iterations: 0.33872859317637555
500 Cost after 49800 iterations: 0.33868142326962075
501 Cost after 49900 iterations: 0.3386345135088222
502 Cost after 50000 iterations: 0.33858786180795536
503 Train cost: 0.3385873965870976
504 Train accuracy: 84.04641536321378%
505 Dev cost: 0.34314785387681207
506 Dev accuracy: 83.51200977066088%
507 Result exported.
508
509 Process finished with exit code 0
510
```