

12/02データで11/28データを予測

■学習データの前提
疑似店舗としての行動データを採取したもの

記録された行動

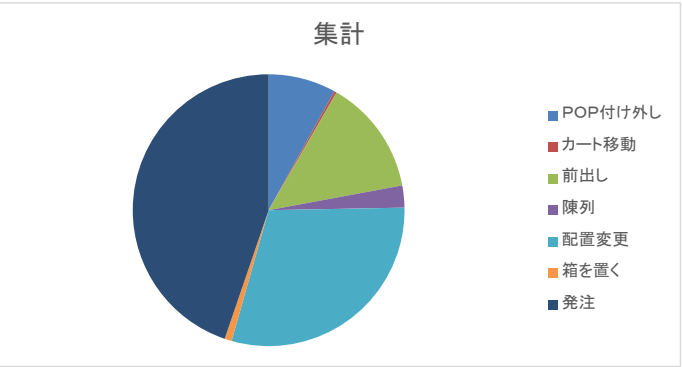
作業名
POP付け外し
カート移動
事務作業
前出し
陳列
配置変更
箱を置く
発注

■予測結果

(1)ロジスティック回帰を用いた予測

①1日分の行動ラベル

行ラベル	データの個数 / result
POP付け外し	14833
カート移動	552
前出し	25379
陳列	4840
配置変更	54829
箱を置く	1557
発注	82632
総計	184622



②時間帯別の行動割合

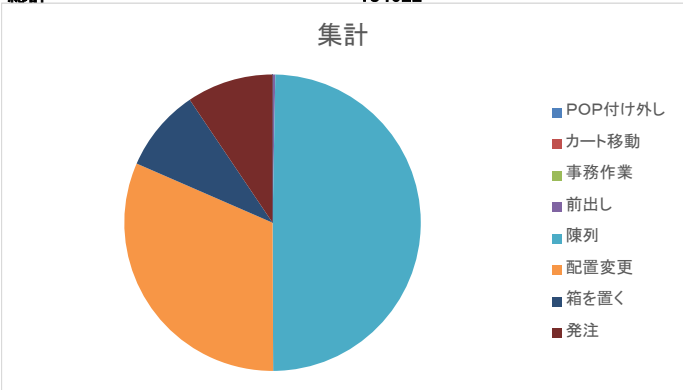
時間帯	POP付け外し	カート移動	事務作業	前出し	陳列	配置変更	箱を置く	発注	時間別ラベル数
2016/11/28 7:15	0%	0%	0%	0%	0%	0%	0%	0%	0
2016/11/28 7:30	4%	6%	0%	17%	0%	50%	1%	22%	1902
2016/11/28 7:45	12%	1%	0%	24%	0%	7%	0%	57%	4387
2016/11/28 8:00	18%	0%	0%	11%	0%	48%	0%	23%	4385
2016/11/28 8:15	8%	0%	0%	10%	0%	61%	3%	18%	4387
2016/11/28 8:30	17%	0%	0%	7%	0%	39%	0%	37%	4387
2016/11/28 8:45	15%	0%	0%	3%	0%	36%	0%	46%	4393
2016/11/28 9:00	17%	1%	0%	22%	0%	31%	8%	21%	4392
2016/11/28 9:15	8%	0%	0%	5%	0%	60%	0%	26%	4396
2016/11/28 9:30	10%	0%	0%	22%	0%	53%	0%	16%	4396
2016/11/28 9:45	6%	0%	0%	14%	0%	51%	2%	28%	4392
2016/11/28 10:00	4%	3%	0%	30%	0%	50%	0%	14%	4028
2016/11/28 10:15	8%	0%	0%	5%	0%	81%	0%	7%	4398
2016/11/28 10:30	12%	2%	0%	7%	0%	59%	0%	19%	4393
2016/11/28 10:45	15%	0%	0%	17%	0%	55%	2%	11%	4386
2016/11/28 11:00	5%	0%	0%	12%	0%	77%	0%	6%	4394
2016/11/28 11:15	6%	0%	0%	16%	1%	51%	1%	26%	3998
2016/11/28 11:30	0%	0%	0%	2%	0%	11%	0%	87%	4390
2016/11/28 11:45	1%	0%	0%	8%	1%	9%	0%	81%	4399
2016/11/28 12:00	4%	0%	0%	17%	1%	29%	0%	48%	4392
2016/11/28 12:15	17%	0%	0%	36%	6%	21%	1%	19%	4390
2016/11/28 12:30	10%	0%	0%	18%	49%	10%	1%	12%	4395
2016/11/28 12:45	8%	0%	0%	21%	44%	14%	1%	13%	4391
2016/11/28 13:00	8%	0%	0%	27%	0%	47%	0%	17%	4217
2016/11/28 13:15	0%	0%	0%	0%	0%	0%	0%	0%	0
2016/11/28 13:30	0%	0%	0%	0%	0%	0%	0%	0%	0
2016/11/28 13:45	18%	3%	0%	25%	0%	41%	4%	9%	3056
2016/11/28 14:00	22%	0%	0%	42%	0%	28%	0%	8%	4393
2016/11/28 14:15	8%	0%	0%	12%	0%	54%	5%	20%	4389
2016/11/28 14:30	3%	0%	0%	6%	0%	9%	0%	82%	4397
2016/11/28 14:45	2%	1%	0%	4%	3%	26%	3%	62%	4395
2016/11/28 15:00	10%	0%	0%	4%	0%	22%	0%	64%	4388
2016/11/28 15:15	8%	0%	0%	1%	1%	9%	0%	81%	4395

2016/11/28 15:30	4%	0%	0%	8%	0%	20%	1%	67%	4397
2016/11/28 15:45	2%	0%	0%	10%	0%	15%	0%	73%	4397
2016/11/28 16:00	8%	0%	0%	4%	0%	7%	1%	79%	4394
2016/11/28 16:15	3%	0%	0%	16%	0%	13%	1%	66%	4391
2016/11/28 16:30	6%	0%	0%	11%	1%	10%	1%	72%	4391
2016/11/28 16:45	9%	0%	0%	16%	1%	17%	0%	56%	4398
2016/11/28 17:00	4%	0%	0%	32%	0%	14%	0%	50%	4391
2016/11/28 17:15	0%	0%	0%	9%	0%	8%	0%	82%	4396
2016/11/28 17:30	17%	0%	0%	17%	0%	32%	0%	35%	4395
2016/11/28 17:45	5%	0%	0%	9%	0%	5%	1%	81%	4394
2016/11/28 18:00	2%	0%	0%	15%	2%	8%	1%	72%	4391
2016/11/28 18:15	1%	0%	0%	7%	0%	11%	0%	81%	4397
2016/11/28 18:30	0%	0%	0%	0%	0%	0%	0%	100%	4355
2016/11/28 18:45	6%	0%	0%	4%	3%	21%	0%	66%	444

(2)k近傍法を用いた予測

①1日分の行動ラベル

行ラベル	データの個数 / result
POP付け外し	2
カート移動	23
事務作業	36
前出し	489
陳列	91645
配置変更	58331
箱を置く	16669
発注	17427
総計	184622



②時間帯別の行動割合

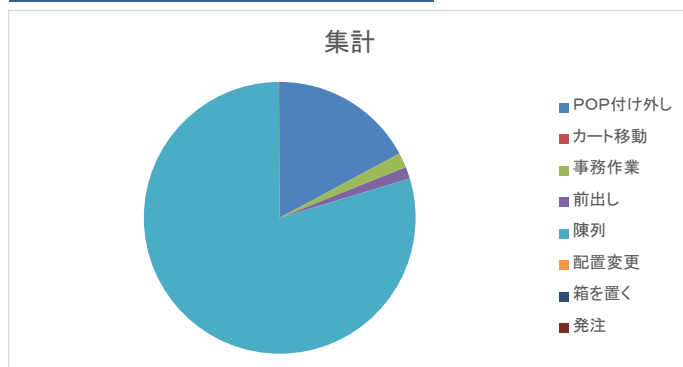
時間帯	POP付け外し	カート移動	事務作業	前出し	陳列	配置変更	箱を置く	発注	時間別ラベル数
2016/11/28 7:15	0%	0%	0%	0%	0%	0%	0%	0%	0
2016/11/28 7:30	0%	0%	0%	0%	79%	2%	19%	0%	1902
2016/11/28 7:45	0%	0%	0%	1%	43%	43%	11%	2%	4387
2016/11/28 8:00	0%	0%	0%	3%	71%	22%	4%	0%	4385
2016/11/28 8:15	0%	0%	0%	0%	76%	21%	3%	0%	4387
2016/11/28 8:30	0%	0%	0%	0%	63%	34%	0%	3%	4387
2016/11/28 8:45	0%	0%	0%	0%	35%	50%	0%	15%	4393
2016/11/28 9:00	0%	0%	0%	0%	62%	22%	12%	4%	4392
2016/11/28 9:15	0%	0%	0%	0%	69%	31%	0%	0%	4396
2016/11/28 9:30	0%	0%	0%	0%	60%	39%	0%	0%	4396
2016/11/28 9:45	0%	0%	0%	0%	55%	35%	9%	1%	4392
2016/11/28 10:00	0%	0%	0%	0%	74%	24%	2%	0%	4028
2016/11/28 10:15	0%	0%	0%	0%	71%	29%	0%	0%	4398
2016/11/28 10:30	0%	1%	0%	2%	58%	30%	3%	6%	4393
2016/11/28 10:45	0%	0%	0%	0%	75%	21%	4%	0%	4386
2016/11/28 11:00	0%	0%	0%	0%	77%	22%	1%	0%	4394
2016/11/28 11:15	0%	0%	0%	0%	61%	36%	3%	0%	3998
2016/11/28 11:30	0%	0%	0%	0%	16%	70%	7%	7%	4390
2016/11/28 11:45	0%	0%	0%	0%	33%	62%	4%	0%	4399
2016/11/28 12:00	0%	0%	0%	0%	34%	55%	2%	10%	4392
2016/11/28 12:15	0%	0%	0%	0%	69%	16%	14%	1%	4390
2016/11/28 12:30	0%	0%	0%	0%	83%	7%	8%	2%	4395
2016/11/28 12:45	0%	0%	0%	0%	91%	3%	5%	1%	4391
2016/11/28 13:00	0%	0%	0%	0%	78%	17%	5%	0%	4217
2016/11/28 13:15	0%	0%	0%	0%	0%	0%	0%	0%	0
2016/11/28 13:30	0%	0%	0%	0%	0%	0%	0%	0%	0
2016/11/28 13:45	0%	0%	0%	0%	83%	10%	7%	0%	3056
2016/11/28 14:00	0%	0%	0%	0%	86%	12%	2%	1%	4393
2016/11/28 14:15	0%	0%	0%	0%	55%	34%	10%	0%	4389
2016/11/28 14:30	0%	0%	0%	0%	21%	51%	6%	22%	4397
2016/11/28 14:45	0%	0%	0%	1%	48%	27%	22%	1%	4395
2016/11/28 15:00	0%	0%	0%	0%	40%	39%	19%	1%	4388
2016/11/28 15:15	0%	0%	0%	0%	53%	42%	5%	1%	4395
2016/11/28 15:30	0%	0%	0%	0%	30%	38%	20%	13%	4397
2016/11/28 15:45	0%	0%	0%	0%	23%	38%	8%	31%	4397
2016/11/28 16:00	0%	0%	0%	0%	31%	17%	20%	32%	4394
2016/11/28 16:15	0%	0%	0%	0%	25%	56%	11%	8%	4391
2016/11/28 16:30	0%	0%	0%	0%	17%	53%	28%	1%	4391
2016/11/28 16:45	0%	0%	0%	0%	37%	35%	15%	13%	4398
2016/11/28 17:00	0%	0%	0%	2%	39%	24%	28%	7%	4391

2016/11/28 17:15	0%	0%	0%	0%	24%	22%	8%	45%	4396
2016/11/28 17:30	0%	0%	0%	0%	52%	30%	2%	15%	4395
2016/11/28 17:45	0%	0%	0%	0%	22%	26%	8%	45%	4394
2016/11/28 18:00	0%	0%	0%	0%	28%	28%	22%	22%	4391
2016/11/28 18:15	0%	0%	0%	0%	16%	14%	18%	52%	4397
2016/11/28 18:30	0%	0%	0%	0%	0%	50%	16%	34%	4355
2016/11/28 18:45	0%	0%	0%	0%	50%	35%	15%	0%	444

(3) SVM(RBF)を用いた予測

①1日分の行動ラベル

行ラベル	データの個数 / result
POP付け外し	31668
カート移動	34
事務作業	3233
前出し	2581
陳列	146930
配置変更	13
箱を置く	66
発注	97
総計	184622



②時間帯別の行動割合

時間帯	POP付け外し	カート移動	事務作業	前出し	陳列	配置変更	箱を置く	発注	時間別ラベル数
2016/11/28 7:15	0%	0%	0%	0%	0%	0%	0%	0%	0
2016/11/28 7:30	4%	0%	0%	1%	95%	0%	0%	0%	1902
2016/11/28 7:45	7%	0%	0%	0%	93%	0%	0%	0%	4387
2016/11/28 8:00	15%	0%	0%	0%	84%	0%	0%	0%	4385
2016/11/28 8:15	11%	0%	0%	0%	89%	0%	0%	0%	4387
2016/11/28 8:30	14%	0%	0%	0%	86%	0%	0%	0%	4387
2016/11/28 8:45	65%	0%	0%	0%	35%	0%	0%	0%	4393
2016/11/28 9:00	26%	0%	0%	1%	73%	0%	0%	0%	4392
2016/11/28 9:15	32%	0%	0%	0%	68%	0%	0%	0%	4396
2016/11/28 9:30	24%	0%	0%	1%	75%	0%	0%	0%	4396
2016/11/28 9:45	14%	0%	0%	2%	84%	0%	0%	0%	4392
2016/11/28 10:00	18%	0%	0%	0%	82%	0%	0%	0%	4028
2016/11/28 10:15	28%	0%	0%	0%	72%	0%	0%	0%	4398
2016/11/28 10:30	36%	0%	0%	0%	64%	0%	0%	0%	4393
2016/11/28 10:45	9%	0%	0%	0%	90%	0%	0%	0%	4386
2016/11/28 11:00	8%	0%	0%	0%	92%	0%	0%	0%	4394
2016/11/28 11:15	5%	0%	0%	1%	94%	0%	0%	0%	3998
2016/11/28 11:30	18%	0%	0%	0%	82%	0%	0%	0%	4390
2016/11/28 11:45	14%	0%	0%	1%	86%	0%	0%	0%	4399
2016/11/28 12:00	43%	0%	0%	1%	56%	0%	0%	0%	4392
2016/11/28 12:15	6%	0%	2%	1%	91%	0%	0%	0%	4390
2016/11/28 12:30	7%	0%	0%	2%	91%	0%	0%	0%	4395
2016/11/28 12:45	4%	0%	0%	0%	96%	0%	0%	0%	4391
2016/11/28 13:00	8%	0%	0%	0%	92%	0%	0%	0%	4217
2016/11/28 13:15	0%	0%	0%	0%	0%	0%	0%	0%	0
2016/11/28 13:30	0%	0%	0%	0%	0%	0%	0%	0%	0
2016/11/28 13:45	3%	0%	0%	0%	97%	0%	0%	0%	3056
2016/11/28 14:00	4%	0%	0%	4%	92%	0%	0%	0%	4393
2016/11/28 14:15	19%	0%	0%	0%	81%	0%	0%	0%	4389
2016/11/28 14:30	1%	0%	0%	0%	99%	0%	0%	0%	4397
2016/11/28 14:45	7%	0%	0%	0%	93%	0%	0%	0%	4395
2016/11/28 15:00	10%	0%	0%	0%	89%	0%	0%	0%	4388
2016/11/28 15:15	6%	0%	0%	0%	94%	0%	0%	0%	4395
2016/11/28 15:30	25%	0%	2%	1%	72%	0%	0%	0%	4397
2016/11/28 15:45	24%	1%	4%	3%	69%	0%	1%	0%	4397
2016/11/28 16:00	3%	0%	0%	0%	96%	0%	1%	0%	4394
2016/11/28 16:15	24%	0%	0%	5%	70%	0%	0%	0%	4391
2016/11/28 16:30	12%	0%	0%	1%	87%	0%	0%	0%	4391
2016/11/28 16:45	11%	0%	0%	2%	87%	0%	0%	0%	4398
2016/11/28 17:00	6%	0%	0%	3%	90%	0%	0%	0%	4391
2016/11/28 17:15	46%	0%	7%	1%	46%	0%	0%	1%	4396
2016/11/28 17:30	31%	0%	2%	6%	62%	0%	0%	0%	4395
2016/11/28 17:45	53%	0%	0%	3%	44%	0%	0%	0%	4394
2016/11/28 18:00	14%	0%	5%	14%	68%	0%	0%	0%	4391

2016/11/28 18:15	2%	0%	30%	2%	67%	0%	0%	0%	4397
2016/11/28 18:30	12%	0%	23%	0%	64%	0%	0%	1%	4355
2016/11/28 18:45	8%	0%	0%	0%	92%	0%	0%	0%	444