

### House A

| Model | Feature | Precision | Recall | F-Measure | Accuracy | CV_Accuracy     |
|-------|---------|-----------|--------|-----------|----------|-----------------|
| HMM   | Change  | 36.9      | 35.2   | 31.8      | 71.2     | $72.0 \pm 3.3$  |
|       | Raw     | 30.8      | 13.8   | 12.9      | 59.7     | $58.0 \pm 1.2$  |
|       | Last    | 21.8      | 19.3   | 15.2      | 66.0     | $66.6 \pm 3.0$  |
| SVM   | Change  | 34.7      | 11.4   | 9.5       | 53.1     | $53.1 \pm 11.0$ |
|       | Raw     | 33.2      | 17.0   | 17.4      | 60.6     | $60.6 \pm 9.0$  |
|       | Last    | 26.7      | 27.9   | 27.3      | 93.7     | $93.7 \pm 1.7$  |
| SSVM  | Change  | 13.9      | 10.3   | 7.5       | 53.1     | $53.1 \pm 0.0$  |
|       | Raw     | 23.0      | 15.2   | 15.3      | 61.3     | $61.3 \pm 1.6$  |
|       | Last    | 30.3      | 29.2   | 28.9      | 93.7     | $93.7 \pm 0.2$  |
| CRF   | Change  | 3.1       | 10.0   | 4.8       | 31.3     | $31.3 \pm 0.0$  |
|       | Raw     | 17.9      | 15.7   | 14.9      | 62.1     | $62.1 \pm 0.0$  |
|       | Last    | 19.4      | 19.3   | 14.5      | 65.9     | $65.9 \pm 0.0$  |
| NB    | Change  | 38.1      | 11.6   | 9.9       | 53.2     | $53.1 \pm 0.0$  |
|       | Raw     | 52.7      | 17.3   | 17.0      | 63.1     | $63.0 \pm 0.0$  |
|       | Last    | 28.3      | 28.2   | 27.7      | 94.4     | $94.5 \pm 0.0$  |

### House C

| Model | Feature | Precision | Recall | F-Measure | Accuracy | CV_Accuracy     |
|-------|---------|-----------|--------|-----------|----------|-----------------|
| HMM   | Change  | 24.3      | 18.3   | 18.5      | 79.1     | $74.9 \pm 2.6$  |
|       | Raw     | 3.0       | 5.9    | 3.9       | 48.9     | $45.3 \pm 4.6$  |
|       | Last    | 27.3      | 28.3   | 26.1      | 78.3     | $81.8 \pm 4.7$  |
| SVM   | Change  | 19.3      | 6.4    | 5.0       | 46.6     | $46.6 \pm 11.3$ |
|       | Raw     | 9.2       | 7.2    | 7.2       | 44.5     | $44.5 \pm 14.9$ |
|       | Last    | 25.5      | 27.9   | 25.7      | 80.9     | $80.9 \pm 5.1$  |
| SSVM  | Change  | 12.6      | 6.8    | 5.6       | 50.5     | $50.5 \pm 0.7$  |
|       | Raw     | 20.8      | 13.3   | 14.0      | 55.8     | $55.8 \pm 2.3$  |
|       | Last    | 24.7      | 22.3   | 20.8      | 78.5     | $78.5 \pm 0.4$  |
| CRF   | Change  | 8.1       | 6.1    | 4.5       | 48.0     | $48.0 \pm 0.2$  |
|       | Raw     | 11.5      | 10.6   | 10.4      | 53.5     | $53.5 \pm 0.1$  |
|       | Last    | 12.8      | 15.3   | 13.3      | 78.2     | $78.2 \pm 0.0$  |
| NB    | Change  | 25.5      | 6.5    | 5.2       | 46.7     | $46.5 \pm 0.0$  |
|       | Raw     | 28.3      | 17.0   | 16.1      | 53.3     | $53.3 \pm 0.1$  |
|       | Last    | 32.4      | 28.1   | 26.5      | 81.5     | $81.5 \pm 0.1$  |

#### House B

| Model | Feature | Precision | Recall | F-Measure | Accuracy | CV_Accuracy     |
|-------|---------|-----------|--------|-----------|----------|-----------------|
| HMM   | Change  | 15.9      | 17.9   | 16.8      | 80.7     | $89.5 \pm 1.9$  |
|       | Raw     | 8.9       | 4.9    | 4.5       | 62.3     | $61.9 \pm 8.2$  |
|       | Last    | 13.0      | 15.9   | 13.3      | 81.3     | $89.0 \pm 4.4$  |
| SVM   | Change  | 16.5      | 4.9    | 4.7       | 59.8     | $59.8 \pm 17.0$ |
|       | Raw     | 10.9      | 9.7    | 8.3       | 58.4     | $58.4 \pm 28.9$ |
|       | Last    | 17.3      | 15.1   | 15.0      | 81.9     | $81.9 \pm 9.2$  |
| SSVM  | Change  | 15.3      | 5.0    | 4.8       | 60.4     | $60.4 \pm 0.1$  |
|       | Raw     | 33.5      | 17.4   | 20.9      | 91.2     | $91.2 \pm 0.2$  |
|       | Last    | 26.5      | 20.6   | 18.9      | 85.5     | $85.5 \pm 0.9$  |
| CRF   | Change  | 2.3       | 3.8    | 2.9       | 59.3     | $59.3 \pm 0.0$  |
|       | Raw     | 7.5       | 7.9    | 7.7       | 86.8     | $86.8 \pm 2.3$  |
|       | Last    | 7.5       | 7.7    | 7.5       | 84.4     | $84.4 \pm 0.0$  |
| NB    | Change  | 23.9      | 5.2    | 5.2       | 60.1     | $60.0 \pm 0.0$  |
|       | Raw     | 42.8      | 33.6   | 28.8      | 88.5     | $88.5 \pm 0.0$  |
|       | Last    | 29.9      | 18.5   | 18.5      | 87.8     | $87.8 \pm 0.1$  |

## House A Model HMM Feature Change

|                               | idle | leave house | Eating | use toilet | take shower | brush teeth | go to bed | prepare Breakfast | prepare Dinner | get snack | get drink | put items in dishwasher | unload dishwasher | store groceries | put clothes in washingmachine | unload washingmachine | receive guest |
|-------------------------------|------|-------------|--------|------------|-------------|-------------|-----------|-------------------|----------------|-----------|-----------|-------------------------|-------------------|-----------------|-------------------------------|-----------------------|---------------|
| idle                          | 40.4 | 18.8        | 0.0    | 2.7        | 0.0         | 0.0         | 9.2       | 0.0               | 85.9           | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| leave house                   | 1.3  | 98.7        | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| Eating                        | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| use toilet                    | 18.8 | 1.4         | 0.0    | 68.7       | 0.0         | 0.0         | 9.1       | 0.0               | 2.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| take shower                   | 33.9 | 10.5        | 0.0    | 0.0        | 54.7        | 0.0         | 0.0       | 0.0               | 0.8            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| brush teeth                   | 44.3 | 17.2        | 0.0    | 38.4       | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| go to bed                     | 10.4 | 50.7        | 0.0    | 0.0        | 0.0         | 0.0         | 38.9      | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| prepare Breakfast             | 0.2  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 99.8           | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| prepare Dinner                | 0.0  | 3.7         | 0.0    | 0.0        | 0.0         | 0.0         | 45.8      | 0.0               | 50.6           | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| get snack                     | 34.8 | 0.7         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 64.5           | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| get drink                     | 62.3 | 4.9         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 32.8           | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| put items in dishwasher       | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| unload dishwasher             | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| store groceries               | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| put clothes in washingmachine | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| unload washingmachine         | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| receive guest                 | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |

## House A Model HMM Feature Raw

|                               | idle | leave house | Eating | use toilet | take shower | brush teeth | go to bed | prepare Breakfast | prepare Dinner | get snack | get drink | put items in dishwasher | unload dishwasher | store groceries | put clothes in washingmachine | unload washingmachine | receive guest |
|-------------------------------|------|-------------|--------|------------|-------------|-------------|-----------|-------------------|----------------|-----------|-----------|-------------------------|-------------------|-----------------|-------------------------------|-----------------------|---------------|
| idle                          | 10.3 | 55.5        | 0.0    | 0.0        | 0.0         | 0.0         | 23.8      | 0.0               | 10.4           | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| leave house                   | 0.0  | 100.0       | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| Eating                        | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| use toilet                    | 7.7  | 67.3        | 0.0    | 4.6        | 0.0         | 0.0         | 20.5      | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| take shower                   | 0.0  | 100.0       | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| brush teeth                   | 0.0  | 100.0       | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| go to bed                     | 0.0  | 85.4        | 0.0    | 0.0        | 0.0         | 0.0         | 14.6      | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| prepare Breakfast             | 29.8 | 24.7        | 0.0    | 0.0        | 0.0         | 0.0         | 22.4      | 0.0               | 23.1           | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| prepare Dinner                | 28.2 | 62.7        | 0.0    | 0.0        | 0.0         | 0.0         | 0.4       | 0.0               | 8.7            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| get snack                     | 4.7  | 33.2        | 0.0    | 0.0        | 0.0         | 0.0         | 30.7      | 0.0               | 31.4           | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| get drink                     | 19.4 | 75.7        | 0.0    | 0.0        | 0.0         | 0.0         | 0.7       | 0.0               | 4.2            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| put items in dishwasher       | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| unload dishwasher             | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| store groceries               | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| put clothes in washingmachine | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| unload washingmachine         | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| receive guest                 | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |

## House A Model HMM Feature Last

|                               | idle  | leave house | Eating | use toilet | take shower | brush teeth | go to bed | prepare Breakfast | prepare Dinner | get snack | get drink | put items in dishwasher | unload dishwasher | store groceries | put clothes in washingmachine | unload washingmachine | receive guest |
|-------------------------------|-------|-------------|--------|------------|-------------|-------------|-----------|-------------------|----------------|-----------|-----------|-------------------------|-------------------|-----------------|-------------------------------|-----------------------|---------------|
| idle                          | 81.5  | 9.9         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| leave house                   | 0.1   | 99.9        | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| Eating                        | 0.0   | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| use toilet                    | 97.8  | 1.0         | 0.0    | 0.0        | 0.0         | 0.0         | 1.2       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| take shower                   | 100.0 | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| brush teeth                   | 83.4  | 16.6        | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| go to bed                     | 49.6  | 45.8        | 0.0    | 0.0        | 0.0         | 0.0         | 4.6       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| prepare Breakfast             | 82.2  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 17.8           | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| prepare Dinner                | 92.6  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 7.4            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| get snack                     | 65.7  | 1.1         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 33.2           | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| get drink                     | 90.9  | 0.7         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 8.4            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| put items in dishwasher       | 0.0   | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| unload dishwasher             | 0.0   | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| store groceries               | 0.0   | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| put clothes in washingmachine | 0.0   | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| unload washingmachine         | 0.0   | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| receive guest                 | 0.0   | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |

## House C Model HMM Feature Change

|   | idle  | leave house | Eating | use toilet downstairs | take shower | brush teeth | use toilet upstairs | take bath | shave | go to bed | get dressed | take medication | prepare Breakfast | prepare Lunch | prepare Dinner | get snack | get drink | put items in dishwasher | unload dishwasher | store groceries | Grooming (Collection of 6,9,12,22) | put clothes in washingmachine | unload washingmachine | receive guest | watch tv | read paper | relax | Unknown |     |
|---|-------|-------------|--------|-----------------------|-------------|-------------|---------------------|-----------|-------|-----------|-------------|-----------------|-------------------|---------------|----------------|-----------|-----------|-------------------------|-------------------|-----------------|------------------------------------|-------------------------------|-----------------------|---------------|----------|------------|-------|---------|-----|
| stairs                                  | 73.2  | 11.4        | 0.0    | 0.0                   | 0.3         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.8       | 0.0         | 0.0             | 0.0               | 0.0           | 0.1            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 14.1  | 0.0     |     |
|   | 12.1  | 87.9        | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     |     |
|   | 100.0 | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     |     |
|   | 84.3  | 11.2        | 0.0    | 0.0                   | 33.1        | 0.0         | 0.0                 | 0.0       | 0.0   | 1.8       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 2.7   | 0.0     |     |
| stairs                                  | 66.9  | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 65.2      | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     | 0.0 |
|   | 100.0 | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     |     |
|   | 34.8  | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     |     |
|   | 0.0   | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     |     |
| st                                      | 100.0 | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 97.1      | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     | 0.0 |
|   | 2.9   | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     |     |
|   | 93.0  | 0.0         | 0.0    | 0.0                   | 7.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     |     |
|   | 100.0 | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     |     |
| washer                                  | 100.0 | 0.0         | 0.0    | 19.7                  | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 2.8            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     | 0.0 |
|   | 77.6  | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     |     |
|   | 100.0 | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     |     |
|   | 100.0 | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     |     |
| section of 6,9,12,22)<br>washingmachine | 0.0   | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     |     |
|   | 0.0   | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     |     |
|   | 0.0   | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     |     |
|   | 0.0   | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     |     |
| stairs                                  | 0.0   | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     | 0.0 |
|   | 79.9  | 2.7         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     |     |
| Unknown                                 | 0.0   | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 17.4  | 0.0     |     |

**House C Model HMM Feature Raw**





**House C Model HMM Feature Last**

|             |                                    |      |     |      |         |     |      |     |       |     |
|-------------|------------------------------------|------|-----|------|---------|-----|------|-----|-------|-----|
| Dining      | leave house                        | 0.0  | 4.1 | 26.0 | Unknown | 0.0 | 52.3 | 0.0 | relax | 0.0 |
|             | Eating                             | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | use toilet downstairs              | 0.0  | 1.4 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | take shower                        | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | brush teeth                        | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | use toilet upstairs                | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | take bath                          | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | shave                              | 0.1  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | go to bed                          | 0.5  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | get dressed                        | 0.3  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
| Bathroom    | take medication                    | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | prepare Breakfast                  | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | prepare Lunch                      | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | prepare Dinner                     | 15.3 | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | get snack                          | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | get drink                          | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | put items in dishwasher            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | unload dishwasher                  | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | store groceries                    | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Grooming (Collection of 6,9,12,22) | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
| Kitchen     | put clothes in washingmachine      | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | unload washingmachine              | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | receive guest                      | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | watch tv                           | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | read paper                         | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | relax                              | 52.3 | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
| Living Room | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
| Hallway     | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
| Bedroom     | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
| Bathroom    | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
| Living Room | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
| Bedroom     | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
| Bathroom    | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
| Living Room | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
| Bedroom     | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
| Bathroom    | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
| Living Room | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
| Bedroom     | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
| Bathroom    | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
| Living Room | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             | Unknown                            | 0.0  | 0.0 | 0.0  |         | 0.0 | 0.0  | 0.0 |       | 0.0 |
|             |                                    |      |     |      |         |     |      |     |       |     |

### House A Model SVM Feature Change

[illegible]

## House A Model SVM Feature Raw

|                               | idle | leave house | Eating | use toilet | take shower | brush teeth | go to bed | prepare Breakfast | prepare Dinner | get snack | get drink | put items in dishwasher | unload dishwasher | store groceries | put clothes in washingmachine | unload washingmachine | receive guest |
|-------------------------------|------|-------------|--------|------------|-------------|-------------|-----------|-------------------|----------------|-----------|-----------|-------------------------|-------------------|-----------------|-------------------------------|-----------------------|---------------|
| idle                          | 7.4  | 28.6        | 0.0    | 0.0        | 0.0         | 0.0         | 61.7      | 0.1               | 2.2            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| leave house                   | 0.0  | 66.5        | 0.0    | 0.0        | 0.0         | 0.0         | 33.5      | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| Eating                        | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| use toilet                    | 3.3  | 15.7        | 0.0    | 2.1        | 0.0         | 0.0         | 76.4      | 0.2               | 2.2            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| take shower                   | 0.0  | 19.5        | 0.0    | 0.0        | 0.0         | 0.0         | 80.5      | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| brush teeth                   | 5.8  | 74.7        | 0.0    | 0.1        | 0.0         | 0.0         | 19.3      | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| go to bed                     | 3.6  | 14.9        | 0.0    | 0.0        | 0.0         | 0.0         | 77.6      | 0.0               | 3.9            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| prepare Breakfast             | 6.3  | 15.5        | 0.0    | 0.0        | 0.0         | 0.0         | 64.7      | 4.7               | 7.4            | 0.0       | 1.4       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| prepare Dinner                | 2.4  | 12.2        | 0.0    | 0.0        | 0.0         | 0.0         | 83.3      | 1.3               | 0.4            | 0.0       | 0.3       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| get snack                     | 0.0  | 12.5        | 0.0    | 0.0        | 0.0         | 0.0         | 60.4      | 4.0               | 22.5           | 0.0       | 0.6       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| get drink                     | 2.7  | 9.5         | 0.0    | 0.0        | 0.0         | 0.0         | 59.8      | 3.3               | 13.1           | 0.0       | 11.6      | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| put items in dishwasher       | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| unload dishwasher             | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| store groceries               | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| put clothes in washingmachine | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| unload washingmachine         | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| receive guest                 | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |

## House A Model SVM Feature Last

|                               | idle  | leave house | Eating | use toilet | take shower | brush teeth | go to bed | prepare Breakfast | prepare Dinner | get snack | get drink | put items in dishwasher | unload dishwasher | store groceries | put clothes in washingmachine | unload washingmachine | receive guest |
|-------------------------------|-------|-------------|--------|------------|-------------|-------------|-----------|-------------------|----------------|-----------|-----------|-------------------------|-------------------|-----------------|-------------------------------|-----------------------|---------------|
| idle                          | 86.3  | 6.7         | 0.0    | 0.0        | 0.0         | 0.0         | 7.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| leave house                   | 0.1   | 99.9        | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| Eating                        | 0.0   | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| use toilet                    | 79.4  | 0.5         | 0.0    | 0.0        | 0.0         | 0.0         | 20.1      | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| take shower                   | 99.9  | 0.1         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| brush teeth                   | 84.1  | 6.2         | 0.0    | 0.0        | 0.0         | 0.0         | 9.7       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| go to bed                     | 6.8   | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 93.2      | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| prepare Breakfast             | 98.8  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 1.2       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| prepare Dinner                | 100.0 | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| get snack                     | 98.2  | 1.2         | 0.0    | 0.0        | 0.0         | 0.0         | 0.6       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| get drink                     | 97.3  | 2.7         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| put items in dishwasher       | 0.0   | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| unload dishwasher             | 0.0   | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| store groceries               | 0.0   | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| put clothes in washingmachine | 0.0   | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| unload washingmachine         | 0.0   | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| receive guest                 | 0.0   | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |

## House C Model SVM Feature Change

|            | idle | leave house | Eating | use toilet downstairs | take shower | brush teeth | use toilet upstairs | take bath | shave | go to bed | get dressed | take medication | prepare Breakfast | prepare Lunch | prepare Dinner | get snack | get drink | put items in dishwasher | unload dishwasher | store groceries | Grooming (Collection of 6,9,12,22) | put clothes in washingmachine | unload washingmachine | receive guest | watch tv | read paper | relax | Unknown |
|------------|------|-------------|--------|-----------------------|-------------|-------------|---------------------|-----------|-------|-----------|-------------|-----------------|-------------------|---------------|----------------|-----------|-----------|-------------------------|-------------------|-----------------|------------------------------------|-------------------------------|-----------------------|---------------|----------|------------|-------|---------|
| enter      | 0.6  | 99.0        | 0.0    | 0.0                   | 0.2         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 1.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     |
| downstairs | 0.0  | 100.0       | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     |
| enter      | 0.9  | 98.8        | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.3            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     |
| hall       | 2.4  | 97.3        | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.1               | 0.0           | 0.2            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     |
| upstairs   | 0.5  | 92.6        | 0.0    | 0.0                   | 6.7         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.1       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     |
| downstairs | 3.7  | 92.7        | 0.0    | 0.0                   | 3.1         | 0.1         | 0.0                 | 0.0       | 0.3   | 0.1       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     |
| upstairs   | 3.6  | 94.9        | 0.0    | 0.0                   | 0.5         | 0.0         | 0.0                 | 0.0       | 0.0   | 1.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     |
| downstairs | 0.0  | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     |
| upstairs   | 2.5  | 93.6        | 0.0    | 0.0                   | 3.0         | 0.6         | 0.0                 | 0.0       | 0.3   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     |
| downstairs | 0.0  | 95.0        | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 5.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     |
| upstairs   | 1.5  | 95.3        | 0.0    | 0.0                   | 2.7         | 0.0         | 0.0                 | 0.0       | 0.1   | 0.0       | 0.5         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     |
| downstairs | 1.8  | 96.7        | 0.1    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 1.6       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     |
| upstairs   | 1.8  | 95.9        | 0.1    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.5               | 0.0           | 1.6            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     |
| downstairs | 1.2  | 96.1        | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 2.2            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     |
| upstairs   | 0.5  | 97.3        | 0.1    | 0.5                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.1               | 0.0           | 1.4            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     |
| downstairs | 1.4  | 95.2        | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.3               | 0.0           | 3.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     |
| upstairs   | 0.3  | 96.7        | 0.0    | 0.0                   | 0.7         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.8               | 0.0           | 1.5            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     |
| downstairs | 0.0  | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     |
| upstairs   | 0.0  | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     |
| downstairs | 0.0  | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     |
| upstairs   | 0.0  | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     |
| downstairs | 0.2  | 99.0        | 0.0    | 0.0                   | 0.7         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.1            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     |
| upstairs   | 0.0  | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     |
| downstairs | 0.0  | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     |
| upstairs   | 0.0  | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     |
| downstairs | 0.0  | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     |
| upstairs   | 0.0  | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     |
| downstairs | 0.3  | 99.7        | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     |
| upstairs   | 0.0  | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     |



### House C Model SVM Feature Raw

|            | idle | leave house | Eating | use toilet downstairs | take shower | brush teeth | use toilet upstairs | take bath | shave | go to bed | get dressed | take medication | prepare Breakfast | prepare Lunch | prepare Dinner | get snack | get drink | put items in dishwasher | unload dishwasher | store groceries | Grooming (Collection of 6,9,12,22) | put clothes in washingmachine | unload washingmachine | receive guest | watch tv | read paper | relax | Unknown |
|------------|------|-------------|--------|-----------------------|-------------|-------------|---------------------|-----------|-------|-----------|-------------|-----------------|-------------------|---------------|----------------|-----------|-----------|-------------------------|-------------------|-----------------|------------------------------------|-------------------------------|-----------------------|---------------|----------|------------|-------|---------|
|            | 0.9  | 70.1        | 0.0    | 0.1                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 25.3      | 0.0         | 0.0             | 0.0               | 0.0           | 0.2            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 3.5   | 0.0     |
| downstairs | 0.0  | 67.9        | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 32.0      | 0.0         | 0.0             | 0.0               | 0.0           | 4.1            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 126   | 0.0     |
| upstairs   | 4.7  | 43.8        | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 46.5      | 0.0         | 0.0             | 0.0               | 0.0           | 0.8            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 4.2   | 0.0     |
| downstairs | 0.2  | 45.5        | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 42.6      | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 11.7  | 0.0     |
| upstairs   | 0.9  | 66.6        | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 29.9      | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 2.5   | 0.0     |
| downstairs | 2.7  | 62.1        | 0.0    | 0.0                   | 0.1         | 0.0         | 0.0                 | 0.0       | 0.0   | 32.9      | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 2.2   | 0.0     |
| upstairs   | 0.5  | 67.2        | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 31.6      | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.7   | 0.0     |
| downstairs | 4.5  | 54.5        | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 41.0      | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     |
| upstairs   | 2.4  | 45.7        | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 48.9      | 0.0         | 0.0             | 0.0               | 0.0           | 0.2            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 2.8   | 0.0     |
| downstairs | 6.2  | 93.8        | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     |
| upstairs   | 4.0  | 65.0        | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 29.0      | 0.0         | 0.0             | 0.1               | 0.0           | 1.7            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.2   | 0.0     |
| downstairs | 0.7  | 86.8        | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 6.4       | 0.0         | 0.0             | 0.0               | 0.0           | 1.5            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 4.7   | 0.0     |
| upstairs   | 4.1  | 68.7        | 0.0    | 0.8                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 19.7      | 0.0         | 0.0             | 5.4               | 0.0           | 1.9            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 6.7   | 0.0     |
| downstairs | 8.6  | 58.9        | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 32.6      | 0.0         | 0.0             | 0.0               | 0.0           | 0.2            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 4.1   | 0.0     |
| upstairs   | 0.0  | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 18.2      | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     |
| downstairs | 0.0  | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     |
| upstairs   | 0.0  | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     |
| downstairs | 0.0  | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     |
| upstairs   | 0.0  | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 98.5      | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     |
| downstairs | 1.3  | 0.2         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     |
| upstairs   | 0.0  | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     |
| downstairs | 0.0  | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     |
| upstairs   | 0.0  | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     |
| downstairs | 0.0  | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     |
| upstairs   | 0.1  | 40.8        | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 38.1      | 0.0         | 0.0             | 0.0               | 0.0           | 1.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 20.1  | 0.0     |
| downstairs | 0.0  | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     |

**House C Model SVM Feature Last**

[illegible]

## House A Model SSVM Feature Change

|                               | idle | leave house | Eating | use toilet | take shower | brush teeth | go to bed | prepare Breakfast | prepare Dinner | get snack | get drink | put items in dishwasher | unload dishwasher | store groceries | put clothes in washingmachine | unload washingmachine | receive guest |
|-------------------------------|------|-------------|--------|------------|-------------|-------------|-----------|-------------------|----------------|-----------|-----------|-------------------------|-------------------|-----------------|-------------------------------|-----------------------|---------------|
| idle                          | 0.0  | 100.0       | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| leave house                   | 0.0  | 100.0       | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| Eating                        | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| use toilet                    | 0.0  | 97.0        | 0.0    | 2.9        | 0.0         | 0.0         | 0.1       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| take shower                   | 0.0  | 100.0       | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| brush teeth                   | 0.0  | 99.5        | 0.0    | 0.5        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| go to bed                     | 0.0  | 100.0       | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| prepare Breakfast             | 0.0  | 100.0       | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| prepare Dinner                | 0.0  | 100.0       | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| get snack                     | 0.0  | 100.0       | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| get drink                     | 0.0  | 100.0       | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| put items in dishwasher       | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| unload dishwasher             | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| store groceries               | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| put clothes in washingmachine | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| unload washingmachine         | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| receive guest                 | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |

## House A Model SSVM Feature Raw

|                               | idle | leave house | Eating | use toilet | take shower | brush teeth | go to bed | prepare Breakfast | prepare Dinner | get snack | get drink | put items in dishwasher | unload dishwasher | store groceries | put clothes in washingmachine | unload washingmachine | receive guest |
|-------------------------------|------|-------------|--------|------------|-------------|-------------|-----------|-------------------|----------------|-----------|-----------|-------------------------|-------------------|-----------------|-------------------------------|-----------------------|---------------|
| idle                          | 13.5 | 46.1        | 0.0    | 0.2        | 0.1         | 0.0         | 40.1      | 0.0               | 0.1            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| leave house                   | 0.1  | 80.0        | 0.0    | 0.3        | 0.0         | 0.0         | 19.6      | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| Eating                        | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| use toilet                    | 7.3  | 41.7        | 0.0    | 1.0        | 0.0         | 0.0         | 49.8      | 0.0               | 0.1            | 0.1       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| take shower                   | 3.1  | 43.4        | 0.0    | 1.8        | 0.7         | 0.0         | 50.3      | 0.0               | 0.7            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| brush teeth                   | 6.8  | 79.6        | 0.0    | 0.1        | 0.0         | 1.1         | 12.4      | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| go to bed                     | 7.5  | 38.0        | 0.0    | 0.0        | 0.0         | 0.0         | 54.4      | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| prepare Breakfast             | 6.3  | 34.2        | 0.0    | 3.4        | 0.0         | 0.1         | 55.6      | 0.0               | 0.0            | 0.5       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| prepare Dinner                | 16.0 | 30.2        | 0.0    | 1.4        | 0.0         | 0.3         | 52.0      | 0.0               | 0.0            | 0.1       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| get snack                     | 16.2 | 29.8        | 0.0    | 0.0        | 0.0         | 0.0         | 52.9      | 0.0               | 0.0            | 1.0       | 0.1       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| get drink                     | 17.9 | 20.7        | 0.0    | 0.0        | 0.0         | 0.0         | 61.4      | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| put items in dishwasher       | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| unload dishwasher             | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| store groceries               | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| put clothes in washingmachine | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| unload washingmachine         | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| receive guest                 | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |

## House A Model SSVM Feature Last

[illegible]

## House C Model SSVM Feature Change



[illegible]

### House C Model SSVM Feature Raw

|                         | idle | leave house | Eating | use toilet downstairs | take shower | brush teeth | use toilet upstairs | take bath | shave | go to bed | get dressed | take medication | prepare Breakfast | prepare Lunch | prepare Dinner | get snack | get drink | put items in dishwasher | unload dishwasher | store groceries | Grooming (Collection of 6,9,12,22) | put clothes in washingmachine | unload washingmachine | receive guest | watch tv | read paper | relax | Unknown |     |
|-------------------------|------|-------------|--------|-----------------------|-------------|-------------|---------------------|-----------|-------|-----------|-------------|-----------------|-------------------|---------------|----------------|-----------|-----------|-------------------------|-------------------|-----------------|------------------------------------|-------------------------------|-----------------------|---------------|----------|------------|-------|---------|-----|
| kitchen                 | 36.6 | 36.7        | 0.1    | 0.0                   | 0.0         | 0.0         | 0.2                 | 0.0       | 0.0   | 22.2      | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.1                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 4.1     | 0.0 |
|                         | 9.4  | 74.5        | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 14.4      | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 1.6     | 0.0 |
|                         | 21.3 | 46.3        | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 13.9      | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 18.4    | 0.0 |
|                         | 20.5 | 44.2        | 0.0    | 0.0                   | 0.1         | 0.0         | 0.0                 | 0.0       | 0.0   | 27.9      | 0.0         | 0.0             | 0.0               | 0.0           | 0.1            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.4                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 6.7     | 0.0 |
| staircase               | 6.5  | 69.2        | 0.0    | 0.0                   | 0.0         | 0.1         | 0.1                 | 0.0       | 0.0   | 21.4      | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 2.6     | 0.0 |
|                         | 6.5  | 63.4        | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 24.8      | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 3.3     | 0.0 |
|                         | 8.4  | 48.3        | 0.2    | 0.0                   | 0.2         | 0.0         | 0.0                 | 0.0       | 0.0   | 41.0      | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 1.9     | 0.0 |
|                         | 6.3  | 54.7        | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.2   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     | 0.0 |
| kitchen                 | 5.7  | 41.6        | 0.0    | 0.0                   | 0.4         | 0.0         | 0.0                 | 0.0       | 0.0   | 28.8      | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 9.9     | 0.0 |
|                         | 2.0  | 62.4        | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 50.6      | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 2.1     | 0.0 |
|                         | 31.1 | 48.4        | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 32.8      | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 1.9     | 0.0 |
|                         | 19.3 | 53.2        | 0.0    | 0.0                   | 0.0         | 0.0         | 0.1                 | 0.0       | 0.0   | 20.4      | 0.0         | 0.0             | 0.0               | 0.0           | 0.2            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     | 0.0 |
| bathroom                | 16.9 | 69.6        | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 8.9       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 4.7     | 0.0 |
|                         | 15.4 | 72.7        | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 6.4       | 0.0         | 0.0             | 0.0               | 0.0           | 3.2            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.1                           | 0.0                   | 0.0           | 0.0      | 0.0        | 2.2   | 0.0     | 0.0 |
|                         | 23.2 | 33.2        | 0.0    | 0.0                   | 1.4         | 0.0         | 0.0                 | 0.0       | 0.0   | 36.1      | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 6.0   | 0.0     | 0.0 |
|                         | 51.4 | 26.8        | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 11.2      | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 2.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 8.7   | 0.0     | 0.0 |
| dishwasher              | 0.0  | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     | 0.0 |
|                         | 0.0  | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     | 0.0 |
|                         | 0.0  | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     | 0.0 |
|                         | 0.0  | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     | 0.0 |
| selection of 6,9,12,22) | 0.0  | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     | 0.0 |
|                         | 21.1 | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 39.3      | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 39.6                          | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     | 0.0 |
|                         | 0.0  | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     | 0.0 |
|                         | 0.0  | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     | 0.0 |
| washingmachine          | 0.0  | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     | 0.0 |
|                         | 0.0  | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     | 0.0 |
|                         | 0.0  | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     | 0.0 |
|                         | 0.0  | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     | 0.0 |
| bathroom                | 0.0  | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 11.5      | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.4                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 34.9    | 0.0 |
|                         | 10.9 | 42.2        | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     | 0.0 |
| total                   | 0.0  | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     | 0.0 |

**House C Model SSVM Feature Last**

[illegible]

## House A Model CRF Feature Change

|                               | idle | leave house | Eating | use toilet | take shower | brush teeth | go to bed | prepare Breakfast | prepare Dinner | get snack | get drink | put items in dishwasher | unload dishwasher | store groceries | put clothes in washingmachine | unload washingmachine | receive guest |
|-------------------------------|------|-------------|--------|------------|-------------|-------------|-----------|-------------------|----------------|-----------|-----------|-------------------------|-------------------|-----------------|-------------------------------|-----------------------|---------------|
| idle                          | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 100.0     | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| leave house                   | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 100.0     | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| Eating                        | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| use toilet                    | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 100.0     | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| take shower                   | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 100.0     | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| brush teeth                   | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 100.0     | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| go to bed                     | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 100.0     | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| prepare Breakfast             | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 100.0     | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| prepare Dinner                | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 100.0     | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| get snack                     | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 100.0     | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| get drink                     | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| put items in dishwasher       | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| unload dishwasher             | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| store groceries               | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| put clothes in washingmachine | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| unload washingmachine         | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| receive guest                 | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |

## House A Model CRF Feature Raw

|                               | idle | leave house | Eating | use toilet | take shower | brush teeth | go to bed | prepare Breakfast | prepare Dinner | get snack | get drink | put items in dishwasher | unload dishwasher | store groceries | put clothes in washingmachine | unload washingmachine | receive guest |
|-------------------------------|------|-------------|--------|------------|-------------|-------------|-----------|-------------------|----------------|-----------|-----------|-------------------------|-------------------|-----------------|-------------------------------|-----------------------|---------------|
| idle                          | 9.4  | 28.8        | 0.0    | 0.0        | 0.0         | 0.0         | 61.7      | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| leave house                   | 0.0  | 66.5        | 0.0    | 0.0        | 0.0         | 0.0         | 33.5      | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| Eating                        | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| use toilet                    | 3.8  | 11.9        | 0.0    | 0.0        | 0.0         | 0.0         | 84.3      | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| take shower                   | 0.0  | 12.5        | 0.0    | 0.0        | 0.0         | 0.0         | 87.5      | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| brush teeth                   | 5.9  | 74.2        | 0.0    | 0.0        | 0.0         | 0.0         | 19.9      | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| go to bed                     | 3.6  | 14.9        | 0.0    | 0.0        | 0.0         | 0.0         | 81.5      | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| prepare Breakfast             | 0.0  | 19.1        | 0.0    | 0.0        | 0.0         | 0.0         | 80.9      | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| prepare Dinner                | 5.9  | 12.2        | 0.0    | 0.0        | 0.0         | 0.0         | 81.9      | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| get snack                     | 13.5 | 13.9        | 0.0    | 0.0        | 0.0         | 0.0         | 72.5      | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| get drink                     | 4.7  | 15.2        | 0.0    | 0.0        | 0.0         | 0.0         | 80.1      | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| put items in dishwasher       | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| unload dishwasher             | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| store groceries               | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| put clothes in washingmachine | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| unload washingmachine         | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| receive guest                 | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |

## House A Model CRF Feature Last

[illegible]



## House C Model CRF Feature Change

[illegible]

**House C Model CRF Feature Raw**

[illegible]

**House C Model CRF Feature Last**



## House A Model NB Feature Change

|                               | idle | leave house | Eating | use toilet | take shower | brush teeth | go to bed | prepare Breakfast | prepare Dinner | get snack | get drink | put items in dishwasher | unload dishwasher | store groceries | put clothes in washingmachine | unload washingmachine | receive guest |
|-------------------------------|------|-------------|--------|------------|-------------|-------------|-----------|-------------------|----------------|-----------|-----------|-------------------------|-------------------|-----------------|-------------------------------|-----------------------|---------------|
| idle                          | 0.0  | 99.9        | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| leave house                   | 0.0  | 100.0       | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| Eating                        | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| use toilet                    | 0.0  | 94.4        | 0.0    | 5.1        | 0.5         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| take shower                   | 0.0  | 98.8        | 0.0    | 0.0        | 1.2         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| brush teeth                   | 0.0  | 96.6        | 0.0    | 1.1        | 2.3         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| go to bed                     | 0.0  | 100.0       | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| prepare Breakfast             | 0.2  | 93.1        | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 4.8               | 0.9            | 0.9       | 0.3       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| prepare Dinner                | 0.3  | 98.9        | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.5               | 0.1            | 0.1       | 0.1       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| get snack                     | 0.0  | 93.2        | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 4.3               | 0.6            | 1.9       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| get drink                     | 0.0  | 90.6        | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 5.7               | 0.6            | 3.1       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| put items in dishwasher       | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| unload dishwasher             | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| store groceries               | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| put clothes in washingmachine | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| unload washingmachine         | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |
| receive guest                 | 0.0  | 0.0         | 0.0    | 0.0        | 0.0         | 0.0         | 0.0       | 0.0               | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                           | 0.0                   | 0.0           |

## House A Model NB Feature Raw

[illegible]



## House A Model NB Feature Last

[illegible]

## House C Model NB Feature Change

[illegible]

**House C Model NB Feature Raw**

|                          | idle | leave house | Eating | use toilet downstairs | take shower | brush teeth | use toilet upstairs | take bath | shave | go to bed | get dressed | take medication | prepare Breakfast | prepare Lunch | prepare Dinner | get snack | get drink | put items in dishwasher | unload dishwasher | store groceries | Grooming (Collection of 6,9,12,22) | put clothes in washingmachine | unload washingmachine | receive guest | watch tv | read paper | relax | Unknown |     |     |
|--------------------------|------|-------------|--------|-----------------------|-------------|-------------|---------------------|-----------|-------|-----------|-------------|-----------------|-------------------|---------------|----------------|-----------|-----------|-------------------------|-------------------|-----------------|------------------------------------|-------------------------------|-----------------------|---------------|----------|------------|-------|---------|-----|-----|
| downstairs               | 34.5 | 37.7        | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 23.4      | 0.0         | 0.0             | 0.0               | 0.0           | 0.1            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.1                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 4.1     | 0.0 |     |
|                          | 6.1  | 67.6        | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 21.6      | 0.0         | 0.0             | 0.0               | 0.0           | 0.1            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 4.8     | 0.0 |     |
|                          | 20.0 | 46.4        | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 14.6      | 0.0         | 0.0             | 0.0               | 0.0           | 0.1            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 18.8    | 0.0 |     |
|                          | 14.5 | 34.9        | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 39.5      | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.7                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 10.4    | 0.0 |     |
| upstairs                 | 9.2  | 55.5        | 0.0    | 0.0                   | 0.0         | 0.1         | 0.1                 | 0.0       | 0.1   | 27.3      | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 9.0     | 0.0 |     |
|                          | 6.6  | 52.6        | 0.0    | 0.0                   | 0.2         | 0.0         | 0.0                 | 0.0       | 0.0   | 31.5      | 0.1         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 7.8     | 0.0 |     |
|                          | 12.3 | 34.1        | 0.0    | 0.0                   | 0.0         | 0.0         | 0.7                 | 0.0       | 0.0   | 45.8      | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 7.2     | 0.0 |     |
|                          | 7.6  | 56.1        | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 8.0     | 0.0 |     |
| in                       | 8.1  | 38.9        | 0.0    | 0.0                   | 0.0         | 0.0         | 0.1                 | 0.0       | 0.0   | 28.0      | 0.2         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     | 26  | 0.0 |
|                          | 9.0  | 40.1        | 0.0    | 0.0                   | 0.0         | 0.0         | 0.2                 | 0.0       | 0.1   | 50.4      | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 15.8    | 0.0 |     |
|                          | 6.1  | 72.9        | 0.1    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 17.4      | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.7     | 0.0 |     |
|                          | 19.4 | 66.9        | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 16.0      | 0.0         | 0.0             | 0.0               | 0.5           | 1.6            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 3.6     | 0.0 |     |
| downstairs               | 9.7  | 72.7        | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 1.9       | 0.0         | 0.0             | 0.0               | 0.1           | 10.3           | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 5.5     | 0.0 |     |
|                          | 38.0 | 13.5        | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 31.6      | 0.0         | 0.0             | 0.0               | 0.0           | 1.8            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 15.2    | 0.0 |     |
|                          | 36.4 | 31.5        | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 14.9      | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 3.6                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 13.6    | 0.0 |     |
|                          | 0.0  | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     | 0.0 |     |
| upstairs                 | 0.0  | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     | 0.0 |     |
|                          | 0.0  | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     | 0.0 |     |
|                          | 0.0  | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     | 0.0 |     |
|                          | 0.0  | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     | 0.0 |     |
| Collection of 6,9,12,22) | 0.0  | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 99.1                               | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     | 0.0 |     |
|                          | 0.0  | 0.9         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     | 0.0 |     |
|                          | 0.0  | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     | 0.0 |     |
|                          | 0.0  | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     | 0.0 |     |
| gymachine                | 0.0  | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     | 0.0 |     |
|                          | 0.0  | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     | 0.0 |     |
|                          | 0.0  | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     | 0.0 |     |
|                          | 0.0  | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     | 0.0 |     |
| Collection of 6,9,12,22) | 12.9 | 30.4        | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 12.6      | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 1.1                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 42.9    | 0.0 |     |
|                          | 0.0  | 0.0         | 0.0    | 0.0                   | 0.0         | 0.0         | 0.0                 | 0.0       | 0.0   | 0.0       | 0.0         | 0.0             | 0.0               | 0.0           | 0.0            | 0.0       | 0.0       | 0.0                     | 0.0               | 0.0             | 0.0                                | 0.0                           | 0.0                   | 0.0           | 0.0      | 0.0        | 0.0   | 0.0     | 0.0 |     |

**House C Model NB Feature Last**



