## **Work Assignments Codebook**

## **Work Assignments**

- officer\_id: Unique identifier for each officer.
- month: Month of the shift in YYYY-MM-DD format. The day is always the first day of the month.
- rank: Rank of the officer assigned to the shift.
- unit: Unit of the officer assigned to the shift.
- date: Date of the shift in YYYY-MM-DD format.
- **shift**: The shift the officer is assigned to.
- start time: Hour start time of the shift in military time.
- end\_time: Hour end time of the shift in military time.
- weekday: Day of the week of the shift.
- beat assigned: The beat the officer is assigned to.
- appointed month: The month and year the officer was made an officer.
- months\_from\_start: The number of months between the officer's appointment date and their shift date.
- months\_from\_start\_sq: The number of months between the officer's appointment date and their shift date, squared.
- duration: Length of the shift in hours.
- assignment\_id: Column created by Risi for uniquely identifying each observation in the work assignment table.
- Uniquely identified by **officer\_id** and **date** or **assignment\_id**. The unit of observation is a specific work assignment for a specific officer.
- Number of officer work assignments: 3519518
- Number of unique officers: 8502

| variable | value                             | nr        | prop  | nr_unique |
|----------|-----------------------------------|-----------|-------|-----------|
| rank     | POLICE OFFICER                    | 3,050,853 | 0.867 | 19        |
| rank     | SERGEANT                          | 281,965   | 0.080 | 19        |
| rank     | POLICE OFFICER / FLD TRNG OFFICER | 74,751    | 0.021 | 19        |

| variable | value  | $\operatorname{nr}$ | prop nr_unique |
|----------|--|---------------------|----------------|
| rank     |  | 53,765              | 0.015 19       |
| rank     | POLICE OFFICER (ASSIGNED AS DETECTIVE)           | 28,077              | 0.008 19       |
| rank     | COMMANDER  | 16,467              | 0.005 19       |
| rank     | LIEUTENANT                                       | 4,678               | 0.001 19       |
| rank     | POLICE OFFICER (ASSIGNED AS SECURITY SPECIALIST) | 3,918               | 0.001 19       |
| rank     | POLICE OFFICER (PER ARBITRATION AWARD)           | 2,909               | 0.001 19       |
| rank     | POLICE OFFICER (ASSIGNED AS CANINE HANDLER)      | 1,080               | 0.000 19       |
| rank     | DEPUTY CHIEF                                     | 350                 | 0.000 19       |
| rank     | POLICE AGENT                                     | 275                 | 0.000 19       |
| rank     | EXPLOSIVES TECHNICIAN I                          | 218                 | 0.000 19       |
| rank     | POLICE OFFICER (ASGND AS MARINE OFFICER)         | 84                  | 0.000 19       |
| rank     | POLICE OFFICER (ASSIGNED AS EVIDENCE TECHNICIAN  | 77                  | 0.000 19       |
| rank     | CHIEF  | 47                  | 0.000 19       |
| rank     | SERGEANT ( PER ARBTRN AGR)                       | 2                   | 0.000 19       |
| rank     | POLICE LEGAL OFFICER I                           | 1                   | 0.000 19       |
| rank     | POLICE LEGAL OFFICER II                          | 1                   | 0.000 19       |
| shift    | 3  | 1,331,644           | 0.378 3        |
| shift    | 2  | 1,204,317           | 0.342 3        |
| shift    | 1  | 983,557             | 0.279 3        |
| unit     | 7  | 210,250             | $0.060\ 25$    |
| unit     | 8  | 200,102             | $0.057\ 25$    |
| unit     | 11   | 197,317             | $0.056\ 25$    |
| unit     | 2  | 194,330             | $0.055\ 25$    |
| unit     | 12   | 191,057             | $0.054\ 25$    |
| unit     | 9  | 185,394             | 0.053 25       |
| unit     | 19   | 184,942             | 0.053 25       |
| unit     | 3  | 182,661             | $0.052\ 25$    |
|          |  |                     |                |

| variable     | value   | nr          | prop nr_unique |
|--------------|---------|-------------|----------------|
| unit         | 6       | 179,211     | 0.051 25       |
| unit         | 4       | 176,369     | $0.050\ 25$    |
| unit         | 25      | 169,000     | $0.048\ 25$    |
| unit         | 10      | 149,365     | $0.042\ 25$    |
| unit         | 24      | 144,866     | $0.041\ 25$    |
| unit         | 15      | 139,062     | $0.040\ 25$    |
| unit         | 18      | 137,113     | $0.039\ 25$    |
| unit         | 22      | 132,216     | $0.038\ 25$    |
| unit         | 5       | 131,301     | $0.037\ 25$    |
| unit         | 14      | 124,804     | $0.035\ 25$    |
| unit         | 1       | 117,569     | $0.033\ 25$    |
| unit         | 20      | 114,630     | $0.033\ 25$    |
| unit         | 17      | 114,422     | $0.033\ 25$    |
| unit         | 16      | 110,579     | $0.031\ 25$    |
| unit         | 13      | 23,516      | $0.007\ 25$    |
| unit         | 23      | 4,846       | $0.001\ 25$    |
| unit         | 21      | 4,596       | $0.001\ 25$    |
| weekday      | Tue     | 547,248     | 0.155 7        |
| weekday      | Wed     | 546,066     | 0.155 7        |
| weekday      | Thu     | 538,404     | $0.153 \ 7$    |
| weekday      | Fri     | 515,802     | 0.147 7        |
| weekday      | Mon     | 508,085     | 0.144 7        |
| weekday      | Sat     | 436,811     | 0.124 7        |
| weekday      | Sun     | $427,\!102$ | 0.121 7        |
| beat_assigne | ed 302  | 12,486      | 0.004 6,616    |
| beat_assigne | ed 2502 | 12,445      | 0.004 6,616    |
| beat_assigne | ed 202  | 12,072      | 0.003 6,616    |
|              |         |             |                |

| variable      | value  | nr     | prop nr_unique |
|---------------|--------|--------|----------------|
| beat_assigned | 1 1902 | 11,923 | 0.003 6,616    |
| beat_assigned | 1 702  | 11,786 | 0.003 6,616    |
| beat_assigned | 1 1802 | 11,654 | 0.003 6,616    |
| beat_assigned | 1 1102 | 11,023 | 0.003 6,616    |
| beat_assigned | 1 102  | 10,265 | 0.003 6,616    |
| beat_assigned | 1 502  | 9,772  | 0.003 6,616    |
| beat_assigned | 1 402  | 9,534  | 0.003 6,616    |

| variable             | mean       | sd         | min | p25    | median | p75      | max       | iqr      | mad        | nr_missing | prop_missing |
|----------------------|------------|------------|-----|--------|--------|----------|-----------|----------|------------|------------|--------------|
| duration             | 8.929      | 0.390      | 0.0 | 9      | 9      | 9.0      | 23.5      | 0.0      | 0.000      | 48,210     | 0.014        |
| end_time             | 22.801     | 6.101      | 0.5 | 16     | 23     | 29.5     | 46.0      | 13.5     | 10.378     | 48,210     | 0.014        |
| months_from_start    | 172.177    | 83.778     | 1.0 | 107    | 172    | 230.0    | 646.0     | 123.0    | 90.439     | 778        | 0.000        |
| months_from_start_sq | 36,663.506 | 31,136.199 | 1.0 | 11,449 | 29,584 | 52,900.0 | 417,316.0 | 41,451.0 | 29,330.276 | 778        | 0.000        |
| start_time           | 13.872     | 6.021      | 0.0 | 7      | 14     | 20.5     | 23.5      | 13.5     | 10.378     | 48,210     | 0.014        |

| variable      | nr_rows   | nr_unique | nr_missing | prop_missing |
|---------------|-----------|-----------|------------|--------------|
| assignment_id | 3,519,518 | 3,519,518 | 0          | 0            |
| officer_id    | 3,519,518 | 8,502     | 0          | 0            |

| variable | min        | p25        | median     | p75        | max        | nr_missing | prop_missing |
|----------|------------|------------|------------|------------|------------|------------|--------------|
| date     | 2012-01-01 | 2012-12-12 | 2013-12-20 | 2014-12-22 | 2016-01-01 | 0          | 0            |

| variable | unit_of_time | value | n       | prop  |
|----------|--------------|-------|---------|-------|
| date     | day          | 1     | 115,249 | 0.033 |
| date     | day          | 2     | 116,403 | 0.033 |
| date     | day          | 3     | 117,259 | 0.033 |
| date     | day          | 4     | 115,539 | 0.033 |

| variable | $unit\_of\_time$ | value | n       | prop  |
|----------|------------------|-------|---------|-------|
| date     | day              | 5     | 115,698 | 0.033 |
| date     | day              | 6     | 116,659 | 0.033 |
| date     | day              | 7     | 115,764 | 0.033 |
| date     | day              | 8     | 115,380 | 0.033 |
| date     | day              | 9     | 117,673 | 0.033 |
| date     | day              | 10    | 117,736 | 0.033 |
| date     | day              | 11    | 116,355 | 0.033 |
| date     | day              | 12    | 115,128 | 0.033 |
| date     | day              | 13    | 116,778 | 0.033 |
| date     | day              | 14    | 116,120 | 0.033 |
| date     | day              | 15    | 116,293 | 0.033 |
| date     | day              | 16    | 116,228 | 0.033 |
| date     | day              | 17    | 117,106 | 0.033 |
| date     | day              | 18    | 116,857 | 0.033 |
| date     | day              | 19    | 114,840 | 0.033 |
| date     | day              | 20    | 113,944 | 0.032 |
| date     | day              | 21    | 113,727 | 0.032 |
| date     | day              | 22    | 114,919 | 0.033 |
| date     | day              | 23    | 116,363 | 0.033 |
| date     | day              | 24    | 115,496 | 0.033 |
| date     | day              | 25    | 112,863 | 0.032 |
| date     | day              | 26    | 113,590 | 0.032 |
| date     | day              | 27    | 114,323 | 0.032 |
| date     | day              | 28    | 114,010 | 0.032 |
| date     | day              | 29    | 107,068 | 0.030 |
| date     | day              | 30    | 107,238 | 0.030 |
| date     | day              | 31    | 66,912  | 0.019 |
|          |                  |       |         |       |

| variable | unit_of_time | value | n       | prop  |
|----------|--------------|-------|---------|-------|
| date     | month        | 1     | 325,715 | 0.093 |
| date     | month        | 2     | 290,736 | 0.083 |
| date     | month        | 3     | 306,344 | 0.087 |
| date     | month        | 4     | 294,192 | 0.084 |
| date     | month        | 5     | 303,018 | 0.086 |
| date     | month        | 6     | 285,139 | 0.081 |
| date     | month        | 7     | 282,029 | 0.080 |
| date     | month        | 8     | 283,371 | 0.081 |
| date     | month        | 9     | 290,104 | 0.082 |
| date     | month        | 10    | 303,180 | 0.086 |
| date     | month        | 11    | 284,225 | 0.081 |
| date     | month        | 12    | 271,465 | 0.077 |
| date     | year         | 2,012 | 922,972 | 0.262 |
| date     | year         | 2,013 | 858,413 | 0.244 |
| date     | year         | 2,014 | 878,666 | 0.250 |
| date     | year         | 2,015 | 857,713 | 0.244 |
| date     | year         | 2,016 | 1,754   | 0.000 |