1431 2025

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Series D – Variable Descriptions and Coding

SOEP-IS 2023 – DIPS3_HOURLY: Smartphone Sensing on the Hourly Level (DIPS Project)

Michael Krämer, Vanessa Brandes, Martin Gerike, Yannick Roos, Ramona Schoedel, Cornelia Wrzus, and David Richter

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Please cite this paper as follows:
Michael Krämer, Vanessa Brandes, Martin Gerike, Yannick Roos, Ramona Schoedel, Cornelia Wrzus, and David Richter, 2025. SOEP-IS 2023 – DIPS3_HOURLY: Smartphone Sensing on the Hourly Level (DIPS Project). SOEP Survey Papers 1431: Series D – Variable Descriptions and Coding. Berlin: DIW Berlin/SOEP

ISSN: 2193-5580 (online)

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The file dips3_hourly is part of a collection, which is released with doi:10.5684/soep.is.2023.

Contents

1 Introduction

Overall Project Description

The DIPS3 study was part of a larger DFG-funded project on "Personality and social relationship dynamics: Short- and medium-term processes in daily life" with Cornelia Wrzus and David Richter as principal investigators. This project had the overall goal to investigate the dynamic, interdependent short-term and medium-term processes that define multiple social relationships and to better understand how these processes differ between people depending on diverse personality characteristics. To this aim, several modes of data collection were employed jointly, such as active daily diary assessments and passive smartphone sensing of behavioral indicators related to social contact (for measurement properties of these social contact indicators, see Roos et al., 2023). The project was given Institutional Review Board approval by Johannes Gutenberg University Mainz (Process Number: 2018JGU-psychEK-002).

DIPS3 Data Collection

The third part of data collection within this project was integrated into the SOEP-IS in wave 2022 with the goal of recruiting members of this already existing panel study to take part in an additional, opt-in data collection with a smartphone app. As reported in Roos et al. (2024), 2,507 participants took part in the SOEP-IS study in 2022 of which 1,322 (53%) reported initial interest in the smartphone study and 844 (34%) fulfilled all requirements (i.e., regularly using a smartphone running on Android Version 6.1 or higher). Finally, roughly 15% of the 2022 SOEP-IS sample, that is, N = 386 participants, took part in the 14-day smartphone study and answered at least one daily diary. A detailed examination of sample selectiviy and different person-related sampling biases associated with selection into mobile sensing studies (including the DIPS3 study) will be available in Schoedel et al. (2024).
At the end of the 2022 interview, SOEP-IS respondents were asked if they owned a smartphone running on Android OS Version 6.1 or higher and if they were interested in participating in an additional 14-day smartphone study. Those who agreed to participate were sent a postal invitation to take part in the study along with instructions on how to install and set up the PhoneStudy app which runs on Android OS (for more information on the app, see https://phonestudy.org/en/). Respondents were informed during the onboarding process about the study procedure and data protection. Informed consent was obtained during the setup of the app.
After the installation of the app, respondents received daily notifications to fill out a brief questionnaire on their mood and social interactions each evening for 14 days. Questionnaires were available each day from 8:00 p.m. to 4:00 a.m. of the following day. Respondents were instructed to answer the questionnaire right before going to bed and received up to two reminders between 8:00 p.m. and 12:00 a.m. Additionally, smartphone sensing ran on the respondents' phones, passively gathering data on anonymized social interactions, phone and app usage, and contact entries. Respondents received 40€ for participation.
Additional study documentation materials including the wording of all items in English and German, the recruitment flyer, and a report on different app versions can be found on https://osf.io/zhc49/. Here, we only present the translated, English version of the items.

Hourly-Level Data

Raw data of smartphone sensing cannot be shared publicly due to privacy concerns and potential identification of respondents due to the richness of these data, especially when

linked with the SOEP-IS panel data. Therefore, for this data release, we selected only the most meaningful behavioral indicators and aggregated them over time.
The second of the three DIPS3 datasets presents the smartphone sensing data on the hourly level with each individual observation defined as an hourly interval, that is, from one full hour to the next, over the entire study period. The very first interval of each respondent starts with the hour of installing the PhoneStudy app and the last interval ends with the hour of deinstallation of the study app.
The purpose of this aggregation time window was to provide a more fine-grained temporal resolution of the smartphone sensing indicators. Thereby, temporal dynamics in these continuously assessed indicators can be examined. Data can be linked to the daily-level data via the "pid" and "n_days" identifers.
For the other two datasets, see:
Aggregated on the daily level:
https://www.diw.de/documents/publikationen/73/diw_01.c.936884.de/diw_ssp1430.pdf
Short surveys after calls:
https://www.diw.de/documents/publikationen/73/diw_01.c.936889.de/diw_ssp1432.pdf

References

Roos, Y., Krämer, M. D., Richter, D., Schoedel, R., & Wrzus, C. (2023). Does Your Smartphone "Know" Your Social Life? A Methodological Comparison of Day Reconstruction, Experience Sampling, and Mobile Sensing. Advances in Methods and Practices in Psychological Science, 6(3), 1–12.
https://doi.org/10.1177/25152459231178738
Roos, Y., Krämer, M. D., Richter, D., & Wrzus, C. (2024). Persons in contexts: The role of social networks and social density for the dynamic regulation of face-to-face interactions in daily life. Journal of Personality and Social Psychology. Advance online publication.
https://doi.org/10.1037/pspp0000512
Schoedel, R., Reiter, T., Krämer, M. D., Roos, Y., Bühner, M., Richter, D., Mehl, M. R., & Wrzus, C. (2024). Person-Related Selection Bias in Mobile Sensing Research: Robust Findings from Two Panel Studies [Manuscript submitted for publication].

2 Identifiers

Data was processed by adding general identifiers to track study progress over time and provide easier filtering. Temporal observations are defined as hourly intervals, that is, from one full hour to the next, over the entire study period. The very first temporal observation of each participant starts with the hour of installing the PhoneStudy App and the last temporal observation ends with the hour of deinstallation of the Study App.

pid – Person ID

1233703	349
1247702	356
1344403	342
2001401	349
2012702	346
2037404	344
2043004	355

...	(372 rows omitted)	129825
41824401		348
41824901		356
41827601		348
41830701		348
41830702		357
41831501		345
41833601		353

Same person identifier as in SOEP-IS data files.

subsample – Subsample

0	[0] no	109559
1	[1] yes	25162

During the study period, an older, outdated app version was distributed for a restricted time window due to a technical error (N = 72 with outdated version; N = 313 with correct version). This older app version differed slightly in some wordings of the daily diary items. Here, we present documentation for the correct app version that the majority of respondents installed. For more details on this matter and an extensive comparison of the two app versions, see OSF repository.
https://osf.io/zhc49/

syear – Survey Year

2022	134721

n_days – Study Day Count

0		4704
1		8973
2		9233
3		9207
4		9208
5		9212
6		9189
...	(16 rows omitted)	74614
-7		102
-8		72
-9		57
-10		48
-11		48
-12		42
-13		12

Counts the number of days after installation starting with 1 at the day after installation where the first daily diary was available to be answered. In contrast to n_diary, this variable takes into account when respondents fill out a questionnaire the following day or have gaps when they skipped a questionnaire. Negative values indicate days before a person answered their first daily diary.

n_hour – Hour of the day

1		6176
2		6174
3		5950
4		5780
5		5767
6		5748
7		5723
...	(10 rows omitted)	55628
18		5416
19		5403
20		5396
21		5390
22		5390
23		5390
24		5390

Counts the hours over which data are aggregated per person and per study day going from 0 to 23.

day – Day of the Week

0	[0] Monday	19103
1	[1] Tuesday	19083
2	[2] Wednesday	19338
3	[3] Thursday	19648
4	[4] Friday	19307
5	[5] Saturday	19135
6	[6] Sunday	19107

weekend – Weekend

0	[0] no	96479
1	[1] yes	38242

3 Texts

Smartphone sensing data is aggregated to track the number of text messages sent per hour as well as the aggregated count of typed characters within these text messages. Only texts typed

in various communication apps are taken into account. Texts typed into search or navigation bars within those apps have been excluded. SMS texts were also not considered because of low occurrence.

texts_outgoing_freq – Number of Texts Sent

0		119201
1		6787
2		3319
3		1832
4		1156
5		734
6		461
...	(21 rows omitted)	1222
28		2
29		1
30		1
32		2
34		1
35		1
50		1

texts_outgoing_length – Character Count of Texts Sent

0		119205
1		78
2		384
3		142
4		278
5		164
6		195
...	(1022 rows omitted)	14268
5357		1
5392		1
5808		1
6016		1
6290		1
8226		1
49830		1

4 App Usage

Smartphone sensing data is aggregated on an hourly level to track participants' usage of different apps per hour. This includes continuous tracking of the frequency of opening an app and the time period using each app. Smartphone sensing starts after setup of the PhoneStudy app and is active until the app is uninstalled. App usage duration times are given in minutes. For more details on the app categorization procedure, see Schoedel et al. (2022).

comm_app_freq – Communication Apps: Frequency

0		86980
1		11717
2		9253
3		6530
4		4760
5		3479
6		2623
...	(41 rows omitted)	9028
50		2
56		1
58		1
62		1
68		1
109		1
-1		344

Schoedel, R., Oldemeier, M., Bonauer, L., & Sust, L. (2022). Systematic categorisation of 3,091 smartphone applications from a large-scale smartphone sensing dataset. Journal of Open Psychology Data, 10(1), 7.
https://doi.org/10.5334/jopd.59

comm_app_time – Communication Apps: Duration

0		86980
0.0000166654586791992		29
0.0000166694323221842		18
0.0000333309173583984		8
0.0000333348910013835		12
0.0000333388646443685		1
0.0000499963760375977		5
...	(43751 rows omitted)	47268
59.8718666672707		1
59.8820166667302		1
59.9744333346685		1
59.9745833317439		1
59.9914833347003		1
60		51
-1		344

socmed_app_freq – Social Media Apps: Frequency

0	117232
1	4485
2	3852
3	2623

4		1796
5		1229
6		843
...	(27 rows omitted)	2311
37		1
39		1
46		1
52		1
53		1
62		1
-1		344

socmed_app_time – Social Media Apps: Duration

0		117232
0.0000166654586791992		24
0.000016669432322184 2		10
0.0000333309173583984		19
0.0000333348910013835		18
0.0000333388646443685		3
0.0000499963760375977		4
...	(16380 rows omitted)	17056
56.6878499984741		1
56.7776333332062		1
57.8850666681925		1
59.1285166660945		1
59.2715166687965		1
60		6
-1		344

audio_app_freq – Audio Entertainment Apps: Frequency

0		130075
1		1550
2		1024
3		630
4		405
5		230
6		128
...	(13 rows omitted)	325
20		3
22		1
23		2
26		2
32		1
41		1
-1		344

audio_app_time – Audio Entertainment Apps: Duration

0		130075
0.0000166654586791992		5
0.0000166694323221842		3
0.0000333309173583984		3
0.0000333348910013835		8
0.0000333388646443685		1
0.0000500003496805827		10
...	(4082 rows omitted)	4266
34.5599999984105		1
36.9872333327929		1
38.9351333340009		1
41.6595833261808		1
41.7905000011126		1
47.8323000033697		1
-1		344

career_app_freq – Career Apps: Frequency

0		133672
1		273
2		225
3		102
4		32
5		19
6		12
...	(2 rows omitted)	18
9		8
10		7
11		1
12		4
13		3
17		1
-1		344

career_app_time – Career Apps: Duration

0	133672
0.0000166654586791992	10
0.0000166694323221842	6
0.0000333309173583984	6
0.0000333348910013835	6
0.0000499963760375977	1

0.00005000034968058 27		10
...	(653 rows omitted)	660
8.58173333803813		1
9.04731666644414		1
9.07821666399638		1
9.64501666625341		1
12.2878499984741		1
13.7912666678429		1
-1		344

create_app_freq – Creativity Apps: Frequency

0	134199
1	69
2	46
3	25
4	14
5	12
6	6
7	2
8	2
11	1
13	1
-1	344

create_app_time – Creativity Apps: Duration

0		134199
0.0000166654586791992		1
0.000016669432322184 2		1
0.0000499963760375977		1
0.000233332316080729		1
0.00115000009536743		1
0.00121666590372721		1
...	(166 rows omitted)	166
19.6731499950091		1
24.2014166673024		1
24.762216659387		1
26.1843166589737		1
26.7029166658719		1
33.5357333302498		1
-1		344

dating_app_freq – Dating Apps: Frequency

0		133815
1		165
2		127
3		97
4		41
5		17
6		22
...	(13 rows omitted)	84
25		3
29		1
31		1
33		1
37		2
38		1
-1		344

dating_app_time – Dating Apps: Duration

0		133815
0.0000166654586791992		5
0.0000333309173583984		3
0.0000333348910013835		3
0.000150001049041748		1
0.000199997425079346		1
0.0012500007947286		1
...	(541 rows omitted)	542
21.6357666691144		1
24.8163500030835		1
27.6878833293915		1
32.3519833405813		1
38.5241999983788		1
48.1976833303769		1
-1		344

finance_app_freq – Finance Apps: Frequency

0		130660
1		1733
2		884
3		485
4		261
5		116
6		70
...	(13 rows omitted)	161
20		1
21		1
25		2

30	1
31	1
33	1
-1	344

finance_app_time – Finance Apps: Duration

0		130660
0.0000166654586791992		14
0.000016669432322184 2		7
0.0000333309173583984		14
0.0000333348910013835		19
0.0000333388646443685		2
0.0000499963760375977		4
...	(3589 rows omitted)	3651
17.0163499951363		1
17.2330666700999		1
19.0231000026067		1
19.1574000000954		1
28.5066166639328		1
42.1579499959946		1
-1		344

food_app_freq – Food Apps: Frequency

0		133229
1		425
2		342
3		165
4		76
5		44
6		39
...	(4 rows omitted)	45
11		3
12		1
13		3
16		3
17		1
20		1
-1		344

food_app_time – Food Apps: Duration

0		133229
0.0000166654586791992		2

0.0000166694323221842		3
0.0000333309173583984		2
0.0000333348910013835		4
0.0000499963760375977		2
0.0000500003496805827		3
...	(1119 rows omitted)	1126
15.0917000015577		1
15.2903333306313		1
15.6102000037829		1
15.6971499959628		1
16.8666833321253		1
17.8180499990781		1
-1		344

game_app_freq – Game Apps: Frequency

0		129515
1		1942
2		1258
3		631
4		409
5		204
6		129
...	(22 rows omitted)	281
35		1
43		2
46		2
61		1
62		1
66		1
-1		344

game_app_time – Game Apps: Duration

0		129515
0.0000166654586791992		33
0.0000166694323221842		13
0.0000333309173583984		15
0.0000333348910013835		11
0.0000333388646443685		2
0.0000499963760375977		6
...	(4467 rows omitted)	4776
43.5466500004133		1
44.0366666595141		1
44.7578166723251		1
46.1949166695277		1
50.4710500001907		1

51.3529666701953	1
-1	344

health_app_freq – Health Apps: Frequency

0	130678
1	2231
2	836
3	309
4	141
5	80
6	27
... (4 rows omitted)	56
11	10
12	3
13	2
14	1
18	2
45	1
-1	344

health_app_time – Health Apps: Duration

0		130678
0.0000166654586791992		12
0.0000166694323221842		8
0.0000333309173583984		10
0.0000333348910013835		11
0.0000499963760375977		8
0.0000500003496805827		4
...	(3511 rows omitted)	3640
28.9384166638056		1
31.0644666671753		1
34.7492166678111		1
36.2890166680018		1
40.5395166635513		1
42.7018000046412		1
-1		344

internet_app_freq – Internet Apps: Frequency

0	113844
1	7844
2	5585
3	2778

4		1601
5		988
6		611
...	(19 rows omitted)	1119
27		2
28		1
30		1
31		1
36		1
46		1
-1		344

internet_app_time – Internet Apps: Duration

0		113844
0.0000166654586791992		30
0.000016669432322184 2		9
0.0000333309173583984		11
0.0000333348910013835		17
0.0000499963760375977		5
0.0000500003496805827		9
...	(17664 rows omitted)	20446
54.3548000017802		1
55.7967333316803		1
56.1459333340327		1
57.2808666706085		1
57.9188833355904		1
59.4885666648547		1
-1		344

know_app_freq – Knowledge Apps: Frequency

0		133462
1		416
2		240
3		113
4		53
5		32
6		27
...	(4 rows omitted)	24
11		1
12		3
14		3
15		1
17		1
26		1
-1		344

know_app_time – Knowledge Apps: Duration

0		133462
0.0000166654586791992		5
0.0000166694323221842		1
0.0000333309173583984		5
0.0000333348910013835		2
0.0000500043233235677		1
0.0000666618347167969		1
...	(886 rows omitted)	894
25.7483166694641		1
29.2025000135104		1
30.6985000014305		1
30.8660166660945		1
39.2304500023524		1
44.4092666665713		1
-1		344

news_app_freq – News Apps: Frequency

0		129477
1		2317
2		1287
3		644
4		319
5		146
6		91
...	(5 rows omitted)	85
12		3
13		3
14		1
15		1
16		2
18		1
-1		344

news_app_time – News Apps: Duration

0		129477
0.0000166654586791992		70
0.0000166694323221842		27
0.0000333309173583984		42
0.0000333348910013835		63
0.0000333388646443685		7

0.0000499963760375977		22
...	(4475 rows omitted)	4663
34.189483332634		1
34.4585333267848		1
36.5673500021299		1
39.7877000013987		1
40.0205500006676		1
41.3940500020981		1
-1		344

orientat_app_freq – Orientation Apps: Frequency

0		131221
1		1432
2		947
3		387
4		174
5		74
6		39
...	(11 rows omitted)	96
19		1
21		1
22		1
23		2
24		1
26		1
-1		344

orientat_app_time – Orientation Apps: Duration

0		131221
0.0000166654586791992		18
0.0000166694323221842		10
0.0000333309173583984		8
0.0000333348910013835		4
0.0000333388646443685		1
0.0000499963760375977		4
...	(2953 rows omitted)	3105
45.7206000049909		1
46.5072833339373		1
47.1935833334923		1
52.331366666158		1
53.6437833309174		1
54.8757166663806		1
-1		344

photo_app_freq – Photography Apps: Frequency

0		125172
1		3652
2		2241
3		1252
4		671
5		423
6		253
...	(29 rows omitted)	705
37		1
39		3
44		1
47		1
53		1
63		1
-1		344

photo_app_time – Photography Apps: Duration

0		125172
0.0000166654586791992		19
0.000016669432322184 2		6
0.0000333309173583984		12
0.0000333348910013835		11
0.0000333388646443685		1
0.0000499963760375977		9
...	(8149 rows omitted)	9141
31.6125000079473		1
32.4375666618347		1
34.4092000007629		1
34.4886666695277		1
43.4587666670481		1
51.9833333333333		1
-1		344

read_app_freq – Reading Apps: Frequency

0	134168
1	82
2	63
3	31
4	14
5	10
6	5
7	2
8	1

11	1
-1	344

read_app_time – Reading Apps: Duration

	0	134168
0.0000166654586791992		1
0.0000333309173583984		1
0.000116666158040365		1
0.000133335590362549		1
0.000333333015441895		1
0.000516668955485026		1
...	(195 rows omitted)	197
8.39638332923253		1
8.84966666698456		1
10.0002500017484		1
10.8863833347956		1
20.7452166676521		1
31.5631500005722		1
-1		344

security_app_freq – Security Apps: Frequency

0		130878
1		2050
2		661
3		317
4		160
5		96
6		59
...	(10 rows omitted)	147
17		4
18		1
19		1
21		1
23		1
120		1
-1		344

security_app_time – Security Apps: Duration

0	130878
0.0000166654586791992	10
0.0000166694323221842	3
0.0000333309173583984	3

0.0000333348910013835		4
0.0000499963760375977		1
0.0000500003496805827		1
...	(3107 rows omitted)	3469
44.7582833210627		1
45.6130833307902		1
48.047866666317		1
50.0134166677793		1
51.3345833341281		1
60		3
-1		344

settings_app_freq – Settings Apps: Frequency

0		129553
1		3072
2		907
3		426
4		159
5		82
6		41
...	(17 rows omitted)	131
26		1
27		1
28		1
31		1
34		1
162		1
-1		344

settings_app_time – Settings Apps: Duration

0		129553
0.0000166654586791992		2
0.0000333309173583984		2
0.0000333348910013835		4
0.0000499963760375977		1
0.0000500003496805827		3
0.0000500043233235677		3
...	(4526 rows omitted)	4802
38.7701999982198		1
40.2238333304723		1
40.7730666677157		1
41.949066666762		1
45.0309000015259		1
60		2
-1		344

shop_app_freq – Shopping Apps: Frequency

0		129438
1		1557
2		1417
3		760
4		421
5		259
6		152
...	(10 rows omitted)	360
17		6
18		1
19		2
21		2
39		1
51		1
-1		344

shop_app_time – Shopping Apps: Duration

0		129438
0.0000166654586791992		25
0.000016669432322184 2		12
0.0000333309173583984		11
0.0000333348910013835		14
0.0000333388646443685		2
0.0000499963760375977		4
...	(4689 rows omitted)	4865
36.84375		1
37.0136333187421		1
45.0166000008583		1
45.4253333449364		1
46.794950000445		1
59.6492000023524		1
-1		344

spirit_app_freq – Spirituality Apps: Frequency

0	134327
1	32
2	13
3	4
4	1
-1	344

spirit_app_time – Spirituality Apps: Duration

0		134327
0.00981666644414266		1
0.0484000007311503		1
0.0717000007629394		1
0.0721666653951009		1
0.0850333372751872		1
0.0904833316802978		1
...	(38 rows omitted)	38
4.74623333215714		1
4.86641666889191		1
4.90411666631699		1
5.28281666835149		1
6.40525000095367		1
9.1451333284378		1
-1		344

time_app_freq – Time Apps: Frequency

0		126445
1		4299
2		2105
3		806
4		353
5		170
6		76
...	(9 rows omitted)	116
16		1
17		2
18		1
19		1
20		1
21		1
-1		344

time_app_time – Time Apps: Duration

0	126445
0.0000166654586791992	7
0.0000166694323221842	4
0.0000333309173583984	6
0.0000333348910013835	2
0.0000499963760375977	4

0.0000500003496805827		3
...	(6245 rows omitted)	7900
30.2243000030518		1
44.4071333289146		1
48.3297000010808		1
52.7702000021934		1
55.3194000005722		1
60		1
-1		344

tools_app_freq – Tools Apps: Frequency

0		121935
1		6969
2		2535
3		1213
4		681
5		365
6		215
...	(23 rows omitted)	456
34		1
36		2
42		1
45		2
49		1
52		1
-1		344

tools_app_time – Tools Apps: Duration

0		121935
0.0000166654586791992		29
0.0000166694323221842		11
0.0000333309173583984		6
0.0000333348910013835		20
0.0000333388646443685		3
0.0000499963760375977		9
...	(9229 rows omitted)	12356
54.8064833323161		1
55.3410500009855		1
55.4262500007947		1
56.9213500022888		1
59.9074833313624		1
60		3
-1		344

transport_app_freq – Transport Apps: Frequency

0		133356
1		415
2		250
3		134
4		75
5		49
6		28
...	(4 rows omitted)	56
11		2
12		5
13		2
14		3
15		1
16		1
-1		344

transport_app_time – Transport Apps: Duration

0		133356
0.0000166654586791992		5
0.0000333309173583984		1
0.0000333348910013835		2
0.0000333388646443685		1
0.000133335590362549		1
0.000199989477793376		1
...	(1002 rows omitted)	1004
11.6909333348274		1
11.7400166710218		1
12.2229666789373		1
12.7977833390236		1
15.3481666684151		1
15.867766670386		1
-1		344

visual_app_freq – Visual Entertainment Apps: Frequency

0		128819
1		2619
2		1555
3		669
4		331
5		145
6		91
...	(7 rows omitted)	135
14		2

15	3
16	3
18	2
19	1
21	2
-1	344

visual_app_time – Visual Entertainment Apps: Duration

0		128819
0.0000166654586791992		33
0.0000166694323221842		17
0.0000333309173583984		24
0.0000333348910013835		22
0.0000333388646443685		3
0.0000499963760375977		7
...	(4989 rows omitted)	5443
58.4353166699409		1
58.4410166660945		1
58.7876666665077		1
59.5952666640282		1
59.8918666680654		1
60		4
-1		344

weather_app_freq – Weather Apps: Frequency

0	132271
1	1332
2	552
3	136
4	39
5	20
6	14
7	6
8	3
9	2
12	1
17	1
-1	344

weather_app_time – Weather Apps: Duration

0	132271
0.0000166654586791992	5

0.0000166694323221842		1
0.0000333309173583984		3
0.0000333348910013835		2
0.0000499963760375977		3
0.0000500003496805827		1
...	(2054 rows omitted)	2085
13.1122833331426		1
14.083349998792		1
21.1301166653633		1
33.7301500002543		1
42.0308333317439		1
43.1320666670799		1
-1		344

Schoedel, R., Oldemeier, M., Bonauer, L., & Sust, L. (2022). Systematic categorisation of 3,091 smartphone applications from a large-scale smartphone sensing dataset. Journal of Open Psychology Data, 10(1), 7.
https://doi.org/10.5334/jopd.59

5 Conversation Detection

Using the AWARE Conversation plugin from Ferreira & Mulukutla (2020), ambient audio signal around the smartphone was sampled following a cycle of one-minute sampling and three-minutes break. A privacy-protective algorithm inferred whether conversation prevailed in ambient sound around the device (binary classification "noise/"voice" where "voice" indicates conversation). This information is used to compute the proportion of detected conversation samplings per hour. In practice, the software sampled at lower rates on several devices, most likely because the operating system aborted the background process to conserve battery life. For more considerations on validity and reliability and comparison with self-report measures of in-person contact, see Roos et al. (2023).

n_aware – AWARE Conversations: Samplings

0		66743
1		2853
2		2720
3		3658
4		3878
5		4300
6		5147
...	(67 rows omitted)	45410
74		3
75		3
76		1
77		2
78		1
79		1
81		1

Ferreira, D., & Mulukutla, R. (2020). AWARE Plugin: Conversations. Retrieved from https://github.com/denzilferreira/com.aware.plugin.studentlife.audio_final
Roos, Y., Krämer, M. D., Richter, D., Schoedel, R., & Wrzus, C. (2023). Does Your Smartphone "Know" Your Social Life? A Methodological Comparison of Day Reconstruction, Experience Sampling, and Mobile Sensing. Advances in Methods and Practices in Psychological Science, 6(3), 1–12.
https://doi.org/10.1177/25152459231178738

n_voice – AWARE Conversations: Conv. Detected

0		117094
1		4975
2		2371
3		1486
4		1134
5		903
6		734
...	(48 rows omitted)	5937
55		18
56		17
57		18
58		15
59		6
60		7
61		6

prop_voice – Proportion of Conversations

0		117094
0.0133333333333333		1
0.0136986301369863		1
0.0149253731343284		2
0.0161290322580645		1
0.0163934426229508		1
0.02		1
...	(905 rows omitted)	17581
0.979591836734694		1
0.982758620689655		1
0.983050847457627		1
0.983333333333333		3
0.983606557377049		5
0.983870967741935		1
1		27

This variable is computed by dividing n_voice by n_aware.