CAMBRIDGE

Cambridge University Press & Assessment
978-1-316-51528-0 — Technology and Measurement around the Globe
Louis Tay, Sang Eun Woo, Tara Behrend
Index
More Information

Index

3C framework · 353

A*STAR institutes · 264
Aadhaar · 223
ABW environments · *See* Activity-Based Working (ABW) environments
accelerometer · 47, 181
accessibility · 60, 171
  vs. accommodations · 5, 314–315
ACDCs · *See* assessment centers and development centers (ACDCs)
Act on the Protection of Personal Information (APPI) · 221
Activity-Based Working (ABW) environments · 61
adaptability · 242
adverse impact · 276
aesthetics · 158
affect · 138–141
Affective Norms for English Words (ANEW) · 139
Age of Spiritual Machines (Kurzweil) · 1
agreeableness · 136
Ahmad, H. · 34
AI · *See* artificial intelligence (AI)
AIG · *See* automatic item generation (AIG)
algorithms
  testing · 352–353
Aloyan, Kristina · 271
Alsarkal, Y. · 112
Altman, I. · 113
Amazon · 337, 339
An, X. · 141
ANEW · *See* Affective Norms for English Words (ANEW)
*a*NN · *See* approximate Nearest Neighbors (*a*NN)
anonymity · 109, 110
anonymization · 117–118
Apgar physical wellness test · 349
APPI · *See* Act on the Protection of Personal Information (APPI)
applicant reactions, GBAs · 169
approximate Nearest Neighbors (*a*NN) · 22
Arnoux, P.-H. · 135
Arslankaya, S. · 139
artificial intelligence (AI) · 1, 11, 170, 239, 259, 283, 308, 328, 344
  in assessment development · 318
  online proctoring (OP) · 314
Asia (technology and measurement)
  biometric privacy · 222
  CAT · 217–218
  common types · 213–220
  data privacy and security · 221–222
  digital activities · 220
  extension of current technological applications · 223–225
  GBAs · 218–220
  influence on technology acceptance · 4
  legal issues · 220–223
  new areas of applications · 226–227
  new technologies · 225–226
  restrictions · 227
  smartphones · 213–216
  social media · 217
  Technology Acceptance Model (TAM) · 227
  wearable sensors · 216–217
assessment
  development · 315, 316, 317, 318, 330
  future of · 321
assessment centers and development centers (ACDCs) · 288–291
asynchronous or automated video interviews (AVIs) · 283
attentional focus · 54
audiovisual footprints · 11
automated (self) assessment · 66
automatic item generation (AIG) · 318
AVIs · *See* asynchronous or automated video interviews (AVIs)
Aware framework · 87
Azure Cognitive Services · 318, 319

© in this web service Cambridge University Press & Assessment www.cambridge.org

CAMBRIDGE
Cambridge University Press & Assessment
978-1-316-51528-0 — Technology and Measurement around the Globe
Louis Tay, Sang Eun Woo, Tara Behrend
Index
More Information

Bachrach, Y. · 136
backpropagation · 32
bagged trees · 17, 26
Balloon Analogue Risk Task (BART) · 174
BART · *See* Balloon Analogue Risk Task (BART)
Basch, J. M. · 294, 295
behavior data · 18
behavioral cues · 183, 184, 190, 201
behavioral sensing · 181
behavioral tendencies · 182
Behrend, Tara · 6, 349
benchmarking · 75
Berry, C. M. · 282
Bersin, J. · 339, 343
bias
  confirmatory · 265
  construct · 186, 190–191
  device type · 186, 192–193, 197
  from user practices · 187, 193–194
  item · 187
  measurement · 185–190
  mitigation strategies, for mobile sensing · 195–200
  model · 21
  sample · 186, 191–192
  -variance tradeoff · 21
big data · 1, 80, 258, 352, 354
  privacy and security issues · 3
Big Error · 112
Big Five personality traits · 15, 34, 52, 179, 183, 283
Bin Morshed, M. · 59
Bioethics and Safety Act of 2005 (BSA) · 223
biometric privacy · 222
black boxmodeling · 35, 36, 170
Bluetooth logs · 52
Blunck, H. · 192
body sensors · 320
Bondi X · 341, 342
Boyd, D. · 80
Brandão, Thais · 326
Brandeis, L. · 113
Branson, Richard · 343
Brazil · 329, 330
Brexit Withdrawal Agreement · 141
Brunswikian lens model · 183, 190
BSA · *See* Bioethics and Safety Act of 2005 (BSA)
Burke, S. J. · 114

California Consumer Privacy Act (CCPA) · 163, 311
California Privacy Rights Act of 2020 (CPRA) · 311
Cameron, M. P. · 141, 143
Canada · 312
candidate experience · 275, 276, 288, 291, 292
career development
  HR technology · 336–340
career growth · 341
CARMA · *See* Consortium for the Advancement of Research Methods and Analysis (CARMA)
Carr, C. T. · 132
CAT · *See* computerized adaptive testing (CAT)
CCPA · *See* California Consumer Privacy Act (CCPA)
Celli, F. · 135
Ceron, A. · 142
CFA · *See* confirmatory factor analysis (CFA)
CFIP · *See* Concern for Information Privacy (CFIP)
Chan, David · 5, 239, 260, 353
change over time · 260–261
chatbots · 5, 298–299, 337, 338
ChatGPT · 357
Chen, Chulin · 157
China · 198, 217
  data protection · 195
  privacy regulations · 222
  security camera infrastructure · 225
  the Pledge · 221
Chinese social media · 137, 147
Circumplex Model of Affect (Russell) · 73
cloud computing · 244, 259
Clubhouse · 132
clustering · 14, 18
CODEX (Core Operations, Development Environment, and eXchange) project · 244
cognitive ability · 282
collaboration/coordination · 61–65
collaborative problem-solving skills · 43
Collins, S. · 143, 144
Communications and Multimedia Act of 1998 · 221
competency · 316–318
complex relations · 11
computational processing unit (CPU) · 37, 38
computational psychometrics · 5, 320–321
computational resources · 37–39
computerized adaptive testing (CAT) · 213, 217–218, 271, 320, 332
conceptualization · 12, 13, 40
Concern for Information Privacy (CFIP) · 114
confirmatory bias · 265
confirmatory factor analysis (CFA) · 185
conscientiousness · 51
Consortium for the Advancement of Research Methods and Analysis (CARMA) · 2
construct bias · 186, 190–191
construct-oriented testing · 350, 353, 357

© in this web service Cambridge University Press & Assessment www.cambridge.org

CAMBRIDGE
Cambridge University Press & Assessment
978-1-316-51528-0 — Technology and Measurement around the Globe
Louis Tay, Sang Eun Woo, Tara Behrend
Index
More Information

context-aware computing · 46
convergence · 197
Cornet, V. P. · 177
COVID-19 pandemic · 49, 217, 225, 255, 315, 326, 336, 340
CPRA · *See* California Privacy Rights Act of 2020 (CPRA)
Crawford, K. · 80
creativity · 243
cross-cultural assessment · 161, 162, 171
cross-cultural differences · 190
cross-cultural research · 177
crosscutting · 72
cross-validation · 13, 14
crossword puzzles · 349
Culbertson, S. S. · 282
cultural differences, in GBAs · 163, 353
culture, and technology · 1
culture-specific models · 179
cyber-sovereignty · 195

daily activities · 51–54, 62
daily life activities · 52
Das Swain, V. · 53, 56, 62, 64, 87
dashboards · 67
data collection · 198
data exhaust · 107
data inference · 109, 110–111
data integration · 108
data management systems · 162
data mining · 262
data missingness · 36–37
data modeling · 87
data privacy · 109
  anonymity · 110
  inference · 110–111
  interconnected privacy · 111–112
Data Privacy Act (DPA) · 221
data privacy, and security · 221–222
data protection laws · 195, 197
data re-identification · 110
data science · 70
data society · 239, 240, 246
data variety · 258, 263
data velocity · 258, 259, 263
data veracity · 259
data volume · 258, 263
data, as inputs · 257
De Choudhury, Munmun · 3, 46, 140
De Fruyt, Filip · 5, 326
de Vries, L. P. · 177
decentering · 197
decision trees · 16, 25, 37
deep neural networks · 32, 86
  black-box model · 36
design thinking · 158
deStress · 216
device type bias · 187, 192–193, 197
Devloo, Toon · 326
Dey, A. K. · 114
differential privacy · 118
digital activities · 220, 227
digital divide · 71
digital footprints · 5, 107, 280, 297–298, 327
digital games · 158
digital phenotyping · 50
Digital Revolution · 241
digital transformation · 239, 240, 244, 246, 254, 267, 308, 337
Dinev, T. · 114
DJIA · *See* Dow Jones Industrial Index (DJIA)
domain-oriented grounding · 79
Dong, Y. · 112
Dow Jones Industrial Index (DJIA) · 144
DPA · *See* Data Privacy Act (DPA)
Dunn, W. · 54
dutifulness and order · 13
dynamic activities · 53
dynamics · 158

EARL · *See* Emotion Annotation and Representation Language (EARL)
ecological momentary assessments (EMAs) · 49
ecological validity · 183, 190
Ecology of Human Performance · 54
education
  reform initiative · 72
  South America · 328
  efficiency · 357
EHP framework · 67
Ekman, P. · 139
elastic net regression · 16, 22
  measuring Big Five personality traits · 34
election results · 145
electrodermal activity (EDA) · 58, 85
electroencephalogram (EEG) · 17, 85, 216
ELISA kit · 215
EMAs · *See* ecological momentary assessments (EMAs)
Emotion Annotation and Representation Language (EARL) · 139
emotions · 138–141, 217, 219, 225
empirical keying · 12, 13, 40
employability · 330
employee behavior · 56
employee engagement · 57
employee experience · 64, 328, 337, 339, 340–342
Employee Social Pulse · 64
employee-first culture · 69

© in this web service Cambridge University Press & Assessment www.cambridge.org

CAMBRIDGE
Cambridge University Press & Assessment
978-1-316-51528-0 — Technology and Measurement around the Globe
Louis Tay, Sang Eun Woo, Tara Behrend
Index
More Information

employment desirability · 68
Estrin, D. · 84
EU · *See* European Union (EU)
European Union (EU)
  General Data Protection Regulation (GDPR) · 114, 163, 169, 195, 221, 280, 311
experience sampling · 49, 177
experiential learning · 357
explanation · 77
externalization · 183, 185
extraversion · 51, 136

Facebook · 131, 134
facial recognition · 225
facilitating conditions · 229
fairness · 355, 357
Family Educational Rights and Privacy Act (FERPA) · 107
feature sampling · 28
features · 13, 71, 79, 182, 184
feedforward neural networks · 31
Feng, T. · 58, 59
FERPA · *See* Family Educational Rights and Privacy Act (FERPA)
Fetzer, M. · 294
Fiesler, C. · 80
Fitbits · 49
fitness trackers · 11, 216, 320, 354
focus and alertness · 60
formative knowledge assessment · 226
Fourth Industrial Revolution · 241

game design thinking · 158
game-based assessments (GBAs) · 4, 5, 157, 213, 218–220, 353, 355
  discussion · 171–172
  limitations · 172
  method · 164–166
  research questions · 162–164
  results · 166–171
  vs. games · 159–162
games
  defined · 158
  vs. game-based assessments (GBAs) · 159–162
gamification · 294
Gao, Q. · 137, 146, 147, 148
Garmin wearable · 55, 59
GBAs · *See* game-based assessments (GBAs)
GDPR · *See* General Data Protection Regulation (GDPR)
General Data Protection Regulation (GDPR) · 114, 163, 169, 195, 221, 280, 311
generalizability · 71, 200
  cross-cultural · 177
  of data · 352
  vs. personalization · 74
geometry test · 349
Glassdoor · 64
Gloystein, Kim K. · 176
Goel, A. · 144
Golbeck, J. · 137
Golder, S. A. · 261
Gonzalez, Cristina · 4, 131
good data · 353
Google Flu predictor algorithm · 80
Gosling, S. D. · 136
GPS data · 180, 181
GPS tracking · 82
GPU · *See* graphics processing unit (GPU)
gradient boosted trees · 17, 29, 37
Graduate Record Exam (GRE) · 349
graphics processing unit (GPU) · 37, 38
ground truth · 13, 34, 55, 72, 184, 351
  algorithms · 352
Groves, R. M. · 107
Guenole, Nigel · 5, 271, 355

Harari, G. M. · 52
Hayes, R. A. · 132
HCI · *See* human computer interaction (HCI)
health and wellbeing · 58–61
heart rate variability (HRV) data · 215, 217, 219
Hernandez, Ivan · 11
HEXACO · 149
Hickman, L. · 34
hidden layer · 32
hierarchical Latent Dirichlet Allocation (hLDA) · 18
hLDA · *See* hierarchical Latent Dirichlet Allocation (hLDA)
Hoffman, M. E. · 76
Holden, R. J. · 177
home-in-community · 251
Hong Kong · 216
Hong, J. I. · 114
Hong, W. · 115
Hopkins, D. J. · 142
Howard, M. C. · 76
Howard, P. N. · 131
HR technology · 301, 336–340
HRV data · *See* heart rate variability (HRV) data
Huffcutt, A. I. · 282
human computer interaction (HCI) · 158
human psychology and behavior, measurement of · 11
human raters · 133
hyperparameter tuning · 13, 14
hypothesis testing · 79

© in this web service Cambridge University Press & Assessment www.cambridge.org

CAMBRIDGE
Cambridge University Press & Assessment
978-1-316-51528-0 — Technology and Measurement around the Globe
Louis Tay, Sang Eun Woo, Tara Behrend
Index
More Information

IBM · 57
iHope · 215
IMDB website · *See* Internet Movie Database (IMDB) website
India · 222, 226
Indian Personal Data Protection Bill · 222
Individual Task Proficiency (ITP) · 55
individuals · 245–246
industries · 242–243, 246
inflation · 115
infrastructure development · 248–251
innovation · 243–245, 246
In-Role Behavior (IRB) · 55
Instagram · 131
institutional review board (IRB) · 354
institutions · 251–254
instrumentation · 316–318
interactions · 11
interconnected privacy · 111–112
International Task Force on Assessment Center Guidelines (2015) · 288
International Test Commission (ITC) · 2, 272
Internet · 271
  activities · 49, 225
  based testing · 271
Internet Movie Database (IMDB) website · 110
Internet of Things (IoT) · 5, 47, 85, 272, 300
Interpersonal and Organizational Deviance (IOD-ID, IOD-OD) · 90
interviews · 11, 170
  European trends · 284
  psychometric measurement · 281–288
IoT · *See* Internet of Things (IoT)
Iran · 216
IRB · *See* In-Role Behavior (IRB), *See* institutional review board (IRB)
ITC · *See* International Test Commission
item bias · 187
iterative user testing · 159
ITP · *See* Individual Task Proficiency (ITP)

Japan · 215, 217, 221
Jebelli, H. · 58
job performance
  and productivity · 54–58
job satisfaction · 18
John, O. P. · 60
Journal of Technology and Testing · 273
Jung, Y. · 18

Kang, J. · 64
KBN · *See* Korean Biobank Network (KBN)
Kent, M. L. · 131
Khan, Md. S. S. · 139
Khwaja, M. · 179
Kim, S. M. · 139
King, G. · 142
Kirelli, Y. · 139
k-means clustering · 14, 15, 18, 55
k-Nearest Neighbors (*k*-NN) · 16, 22–25
k-NN · *See* *k*-Nearest Neighbors (*k*-NN)
knowledge assessment · 354
Korean Biobank Network (KBN) · 223
Kosinski, M. · 143, 144
Kurzweil, Ray · 1

Landay, J. A. · 114
Landers, Richard N. · 4, 157, 282, 355
language
  agnostic assessments · 161, 171
  measuring personality · 133–135
large language models (LLM) · 357
large-scale (remote) assessment · 5
LASSO regression · 16, 22
Latent Dirichlet Allocation (LDA) · 18, 143
Lazer, D. · 80
LDA · *See* Latent Dirichlet Allocation (LDA)
learning management systems · 338
Lederer, S. · 114
Lee, J. · 64
Lee, Vivien · 157
Leesman · 56
legal systems
  varying GBAs · 163
legality · 168
Lejuez, C. W. · 160
Li, S. · 112, 146
life satisfaction · 143–144
linear regression · **15**, 19–20
  white-box model · 35
Linguistic Inquiry and Word Count (LIWC) · 139
link features · 143
LinkedIn · 132, 227
Liu, L. · 136
Liu, Mengqiao · 11
Liu, P. · 261
LIWC · *See* Linguistic Inquiry and Word Count (LIWC)
location data · 11, 47, 52, 53
log files · 18

machine learning (ML) · 338, 341
  and contribution to measurement · 11–13
  avoiding construct-driven focus · 351
  supervised · 134
Macy, M. W. · 261
Makazhanov, A. · 142
Malaysia · 221
Malaysian Communications and Multimedia Content Code · 220

© in this web service Cambridge University Press & Assessment www.cambridge.org

CAMBRIDGE

Cambridge University Press & Assessment
978-1-316-51528-0 — Technology and Measurement around the Globe
Louis Tay, Sang Eun Woo, Tara Behrend
Index
More Information

Mandl, T. · 146
Manyika, J. · 50
Margulis, S. T. · 113
Mark, G. · 58
Marreiros, H. · 115
Martinez, G. J. · 60
MDA framework · *See* Mechanics, Dynamics, Aesthetics (MDA) framework
Measelle, J. R. · 335
measurement bias · 185–190
measurement invariance · 185, 197, 200, 353
mechanics · 158
Mechanics, Dynamics, Aesthetics (MDA) framework · 158
mediated behaviors · 52, 181
Melchers, K. G. · 294, 295
mental health · 48, 51, 58, 226
  assessing through social media data · 140
metadata logs · 181, 184, 190
method bias · 186
Meyer, B. · 62
microlearning · 338
Microsoft Certification exams · 310–311
Miguel, Fabiano Koich · 326
Milberg, S. J. · 114
Min, Hanyi · 4, 131, 142
mindsets, for collaboration · 264–265
Mirjafari, S. · 55
Mittal, A. · 144
ML · *See* machine learning (ML)
ML algorithms · 3, 12
  computational resources · 37–39
  data missingness · 36–37
  general procedures · 13–15
  interpretability *vs.* estimation accuracy · 35–36
  recommendations · 34
mobile phone assessments · 216
mobile sensing · 4, 176, 353
  bias from environmental factors · 194–195
  bias from user practices · 193–194
  bias mitigation strategies · 195–200
  construct bias and nonequivalent behaviors · 190–191
  cross-cultural · 177–181
  device type bias · 192–193
  limitations of bias mitigation strategies · 200–201
  measurement bias · 185–190
  sample bias · 191–192
  underpinnings of · 181–185
mobility · 66
model bias · 21
Modersitzki, Nick · 176
Mohr, D. C. · 47, 74
Montanari, A. · 62
Monti, C. · 142
moods · 59, 138–141
Morgan, Jacob · 337
movement behaviors · 52
Muller, M. · 64
Müller, Sandrine R. · 176
multi-disciplinarity collaboration · 262–264
multi-modality · 56
Munson, Liberty J. · 5, 308, 355
Myors, B. · 166
myPersonality dataset · 134, 135

Nadarajan, A. · 59
Narayanan, A. · 110
Narayanan, S. S. · 58, 59
National Science and Technology Board (NSTB) · 252
natural language processing · 34, 341
nearest neighbor · 16, 22–25
NEO-PI-R · 13
Nepal, S. · 54, 58
Netflix · 110
network coverage · 195
neural networks · 17, 29–34, 36
  deep · 32, 36, 86
  feedforward · 31
neuroticism · 51, 133, 180
n-gram scoring · 34
Nissenbaum, H. · 116
noise insertion · 118–119
nonequivalent behaviors · 190–191
nonlinear relations · 11
North America
  accommodations *vs.* accessibility · 314–315
  AI in assessment development · 318
  computational psychometrics · 320–321
  Microsoft Certification exams · 310–311
  online proctoring (OP) and artificial intelligence (AI) · 314
  opting out of testing · 315–316
  privacy and online proctoring (OP) · 313–314
  privacy laws and regulations · 311–313
  technology in assessment delivery · 318–320
  telemetry and instrumentation to define competence · 316–318
NSTB · *See* National Science and Technology Board (NSTB)

O'Reilly III, C. A. · 63
O'Reilly, C. · 63
observer effect · 80
OCB · *See* Organizational Citizenship Behavior (OCB)

© in this web service Cambridge University Press & Assessment www.cambridge.org

CAMBRIDGE
Cambridge University Press & Assessment
978-1-316-51528-0 — Technology and Measurement around the Globe
Louis Tay, Sang Eun Woo, Tara Behrend
Index
More Information

Occam's razor metaphor · 70
office equipment · 67
Oishi, S. · 143
Olgúin, D. O. · 56, 61
OLPC program · *See* One Laptop per Child (OLPC) program
OLS regression · *See* Ordinary Least Squares (OLS) regression
One Laptop per Child (OLPC) program · 72
online games · 18
online proctoring (OP) · *See* privacy and online proctoring (OP)
online search records · 11
OpenAI · 357
OpenEyes technologies · 319
openness · 51, 180, 243, 266
operationalizations · 78
Ordinary Least Squares (OLS) regression · 15, 19
organic data · 2, 11, 40, 107
  reflecting collaborative problem-solving skills · 18
Organizational Citizenship Behavior (OCB) · 54, 55
organizational culture · 62, 63
organization-centric tools · 67–69
Oswald, D. · 81
Oswald, Fred · 6, 349

Pal, A. · 140
PANAS · *See* positive and negative affect schedule (PANAS)
paradoxical policymaking · 251
Park, G. · 134
Parks, M. R. · 131
Pasch, S. · 64
passive sensing · 3, 46, 50, 70
  infrastructure · 70–72
PDPA · *See* Personal Data Protection Act (PDPA)
PDPC · *See* Personal Data Protection Commission (PDPC)
Penn Philosophy · 351
perceptron · 31
Personal Data Protection Act (PDPA) · 221
Personal Data Protection Commission (PDPC) · 221
personal identifiable information (PII) · 110
personal informatics · 50
personal information · 311
Personal Information Protection Act (PIPA) · 221, 223
Personal Information Protection Law Draft · 222
personal sensing · 50
personality test · 349
personality traits · 12, 327
  activity · 136–137
  language · 133–135
  picture · 135–136
personality, and daily activities · 51–54
personalization · 74, 75
pervasive technologies · 46–48
Pew Research Center · 191
Pfeffer, J. · 80
Phan, Le Vy · 4, 176, 352
Philippines · 219, 221
photoplethysmography (PPG) sensors · 58
physical activity · 66
PII · *See* personal identifiable information (PII)
PIPA · *See* Personal Information Protection Act (PIPA)
Pittsburgh Sleep Quality Index (PSQI) survey · 59
Plötz, T. · 87
polling · 142
Polyak, S.T. · 18
positive and negative affect schedule (PANAS) · 59
PPG sensors · *See* photoplethysmography (PPG) sensors
prediction · 76
Primi, Ricardo · 326
privacy · 166, 354–355
  cynicism · 116
  laws and regulations in North America · 311–313
  models · 82
  research · 119–121
privacy and online proctoring (OP) · 312, 313–314
  and artificial intelligence (AI) · 314
  Microsoft Certification exams · 310–311
privacy concerns · 108, 109, 112, 162
  measurement · 114–117
  privacy concept · 113–114
  psychometric measurement · 279–301
privacy protection
  data removal · 117–118
  noise insertion · 118–119
  technological solutions for · 117
problem-solving skills · 43
productivity, and job performance · 54–58
Proferes, N. · 80
proximity-based sensing · 62
PSQI survey · *See* Pittsburgh Sleep Quality Index (PSQI) survey
psychological assessment · 271, 280, 327
psychological audits · 356
psychological measurement · 11
psychometric issues · 64, 357

© in this web service Cambridge University Press & Assessment www.cambridge.org

CAMBRIDGE

Cambridge University Press & Assessment
978-1-316-51528-0 — Technology and Measurement around the Globe
Louis Tay, Sang Eun Woo, Tara Behrend
Index
More Information

psychometric measurement (European perspective)
  assessment centers and development centers (ACDCs) · 288–291
  assessment methods · 278–279
  chatbots · 298–299
  common psychometric terms · 275–277
  Game Based Assessments (GBAs) · 294–297
  Internet of Things (IoT) · 300
  interviews · 281–288
  method · 273–274
  method *vs.* construct distinction · 277–278
  participants · 274–275
  privacy concerns · 279–301
  resumé parsing · 299–300
  situational judgment tests (SJTs) · 291–294
  social media and digital footprints · 297–298
psychometric models · 2, 271, 272, 309
psychometric testing · 79, 170, 271, 275
psychometrics · 162, 320–321, 357
public network cameras · 225
public opinion · 141
public speaking · 73
Purdue Psychological Sciences · 2
Python · 39

Qiu, L. · 133
quasi-identifiers · 117
Quercia, D. · 136
questionnaires · 285, 327
  European trends · 286

R (programming language) · 39
RAM · *See* random access memory (RAM)
random access memory (RAM) · 37–38
random forests · 17, 27, 34, 37
  black-box model · 36
raw sensor data · 199
reality mining · 50
real-time virtual rooms · 132
refinement, of privacy · 120
regressions · 79
regularization · **15**, 21–22
  elastic net regression · 22
  LASSO regression · 22
  ridge regression · 21
reliability · 275, 295, 301
remote internet testing · 162
research, innovation and enterprise (RIE) plans, Singapore · 252
Research, Innovation and Enterprise Council (RIEC) · 252
resilience · 242
resumé parsing · 299–300
Rhee, L. · 131, 132
ridge regression · 15, 21
RIE plans · *See* research, innovation and enterprise (RIE) plans, Singapore
RIEC · *See* Research, Innovation and Enterprise Council (RIEC)
Robles-Granda, P. · 60
Rosson, M. B. · 56
Roth, P. L. · 282
Russell, J. A. · 73
Ruths, D. · 80

Sackett, P. R. · 282
Saha, K. · 60, 75
sample bias · 186, 191–192
Saville, Peter · 271
Scholastic Gradient Boosted Trees (SGBT) · 29
Schraefel, M. C. · 115
Schwab, Klaus · 241
Schwartz, H. A. · 135
SDU · *See* Smartphone Diagnostic Unit (SDU)
Seder, J. P. · 143
Seidl, Juliana · 326
self-reflection tools · 66
self-reports · 73, 143, 257
SENNA kids · 333–334
SenSocial framework · 87
sensors · 47, 70, 181, 184, 190, 249
  accuracy/precision · 193
  smart fabrics · 85
sentiment analysis · 141
SGBT · *See* Stochastic gradient boosted trees (SGBT)
Shami, N. S. · 64
Shen, W. · 166
Shi, H. · 112
Shin, Hyun Joo · 11, 213
Shmatikov, V. · 110
Sina micro-blog · 137, 147
Sina Weibo · 146
Singapore · 5, 221, 250, 353
Singapore (technology-enabled measurement)
  assessing changes over time · 260–261
  biases · 265–266
  changes · 256
  collaborations · 261
  contexts · 240
  implementation · 254–256
  individuals · 245–246
  industries · 242–243
  infrastructure development · 248–251
  innovation · 243–245
  institutions · 251–254
  mindsets · 264–265
  multi-disciplinarity collaboration · 262–264
  other perspective view · 266–268
  varieties of tools, data, and analytics · 256–260

© in this web service Cambridge University Press & Assessment www.cambridge.org

CAMBRIDGE
Cambridge University Press & Assessment
978-1-316-51528-0 — Technology and Measurement around the Globe
Louis Tay, Sang Eun Woo, Tara Behrend
Index
More Information

Singapore Public Service · 254, 255
SIOP Foundation · *See* Society for Industrial and Organizational Psychology (SIOP) Foundation
situational judgment tests (SJTs) · 291–294, 327
SJTs · *See* situational judgment tests (SJTs)
Skype · 132
Slack · 18, 132
sleep · 59
small data · 70
smart fabrics · 85
Smart Nation · 5, 240, 243
Smartphone Diagnostic Unit (SDU) · 215
smartphones · 213, 215–216, 327, 353
  based measurement · 223
  personality-relevant assessments · 52
smartwatches · 47, 75, 216
Smith, H. J. · 114
Snapchat · 131
social and behavioral insights · 251
social capital · 246
social desirability · 336
social ecology, and human behavior · 83
social interactions · 131
social media · 3, 11, 49, 131, 213, 217, 225
  definition · 131–132
  and digital footprints · 297–298
  variety of data · 258
  virtual communication · 47
social media assessment
  affect/emotions/mood · 138–141
  culture differences · 145–146
  ethical considerations · 149–150
  future directions · 148–149
  language · 146–148
  life satisfaction · 143–144
  personality · 133–138
  population distribution · 144–145
  public/political views · 141–143
  sample selection and filtering · 145
Social Science Research Council (SSRC) · 253, 261
social-emotional skills · 329, 331–333
Society for Industrial and Organizational Psychology (SIOP) Foundation · 2
sociometric badges · 49
soft skills · 319
Solove, D. J. · 115
Song, Q. Chelsea · 3, 4, 11, 213, 352, 353
Soto, C. J. · 60
South America
  career development · 336–340
  SENNA kids · 333–334
  social-emotional skills and technology · 331–333
  technological challenges · 335–336
  technology and measurement · 328–331
  technology on assessment impacts · 326–328
South Korea · 215, 221, 223, 225
Speer, A. B. · 34
Spotify · 338
SSRC · *See* Social Science Research Council (SSRC)
STAI median-split score · *See* State-Trait Anxiety Inventory (STAI) median-split score
standalone games · 160
State-Trait Anxiety Inventory (STAI) median-split score · 58
static ego features · 143
stealth assessment · 4
STEM (science, technology, engineering, and math) subjects · 329
STM · *See* Structural Topic Models (STM)
Stochastic gradient boosted trees (SGBT) · 17
stochastic model-based imputation · 36
Structural Topic Models (STM) · 18
StudentLife project · 51
subjective norms · 228
subjective well-being (SWB) · 217, 219, 225, 226, 261
Suh, Y. · 18
supervised learning · 12, 13, **15**
  example applications · 34
  linear regression · 19–20
  nearest neighbor · 22–25
  neural networks · 29–34
  regularization · 21–22
  SVM · 29
  tree-based models · 25–29
Support Vector Machines (SVM) · 17, 29
  black-box model · 36
surveys · 2, 48, 50, 63, 107, 142, 257
Svensson, Cicek · 271
SVIs · *See* synchronous video interviews (SVIs)
SVM · *See* Support Vector Machines (SVM)
SWB · *See* subjective well-being (SWB)
Sweeney, L. · 110
synchronous video interviews (SVIs) · 283
systematic errors · 186

Taiwan · 215, 218, 219
Takeaway.com · 337
TAM · *See* Technology Acceptance Model (TAM) · *See* Technology Acceptance Model (TAM)
target population · 71, 191, 196, 197, 200
Tay, L. · 78, 187, 199, 200
t-Distributed Stochastic Neighbor Embedding (t-SNE) · 22

© in this web service Cambridge University Press & Assessment www.cambridge.org

CAMBRIDGE
Cambridge University Press & Assessment
978-1-316-51528-0 — Technology and Measurement around the Globe
Louis Tay, Sang Eun Woo, Tara Behrend
Index
More Information

technology · 1, 320, 353–354
  in assessment delivery · 318–320
  and culture · 1
  revolution · 271
  social-emotional skills · 331–333
Technology Acceptance Model (TAM) · 227
technology-based testing · 356
telemetry · 316–318
temporal ego features · 143
Teo, Timothy · 213
Tesserae project · 51, 55
test sets · 13, 14
testing · 349
  algorithms · 352–353
  and constructs · 350
  future research · 356
text parsing · 5, 299–300
Thailand · 222
The Pledge · 221
thermal imaging · 225, 226
Third Industrial Revolution · *See* Digital Revolution
Thong, J. Y. · 115
Tiktok · 132
Tiles projects · 51
Tonin, M. · 115
Top2vec · 18
topic modeling · 13, 14, 15, 19
trace data · 160
Tracy, Meaghan M. · 11
training data · 36
training sets · 13
tree-based models · **16**, 25
  bagged trees · 26
  decision trees · 25
  gradient boosted trees · 29
  random forests · 27
  SGBT · 29
trust · 242, 266
t-SNE · *See* t-Distributed Stochastic Neighbor Embedding (t-SNE)
Turkey · 216
Twitter · 11, 108, 131, 135, 146
  age distribution of · 144

ubiquitous technologies · 46, 48, 85
Umematsu, T. · 59
uncertainty · 115
unemployment · 329, 330
United Nations
  World Social Report 2020 · 1
unobserved behavior · 181
unobtrusive sensing · 80
unstructured data · 272
unsupervised learning · 12, 13, 15, 55
  clustering · 14
  example applications · 18
  topic modeling · 14
Upadhya, Nakul · 213
urban planning · 250
user testing · 159

Vaak (Japanese startup) · 225
validity · 77, 275, 295, 301
variables · 79
video monitoring · 313, 336
Vijver, van de · 186
virtual assistant · 341
virtual reality · 327
virtual worlds · 132
Vlassopoulos, M. · 115
voter-registration records · 108

Wang, Y. · 140
Wang, Z. · 112
Warren, S. · 113
wearable devices · 85, 213, 224, 327
wearable sensors · 11, 47, 49, 216–217
web browsing history · 111
Weibo · 146, 217, 220
WEIRD countries · *See* Western, Educated, Industrialized, Rich and Democratic (WEIRD) countries
Weld, William · 108
wellbeing, workplace · 58–61
Western, Educated, Industrialized, Rich, and Democratic (WEIRD) countries · 161, 176
Weyhrauch, W. S. · 282
White Space funding · 252
white-box models · 35–36
whole-of-society approaches · 252, 255, 261
WiFi data · 47
Wille, Bart · 271
Woo, S. E. · 49
work embedding · 34
worker-centric tools · 65–67
workplace applications · 355–356
workplace measurement, with passive sensing
  challenges · 69
  collaboration/coordination · 61–65
  ethical considerations · 81–84
  existing limitations · 48–50
  health and wellbeing · 58–61
  infrastructure · 70–72
  modeling approaches · 72–77
  organization-centric · 67–69
  personality and daily activities · 51–54

© in this web service Cambridge University Press & Assessment www.cambridge.org

CAMBRIDGE
Cambridge University Press & Assessment
978-1-316-51528-0 — Technology and Measurement around the Globe
Louis Tay, Sang Eun Woo, Tara Behrend
Index
More Information

workplace measurement, with passive sensing (cont.)
practical implications · 65–69
productivity and job performance · 54–58
validation models · 77–81
worker-centric · 65–67
workplace misconduct · 63
World Social Report 2020 (UN) · 1
Xu, Heng · 3, 112, 114, 354
YouTube · 131, 338
Zhang, Nan · 3, 112
Zhao, D. · 56
Zhou, G. · 112
Zoom · 132
Zuanazzi, Ana Carolina · 326

© in this web service Cambridge University Press & Assessment www.cambridge.org