

# Index

## A

abstractive summarization 31, 54, 166, 180, 185, 208, 251  
 advertising 186-190, 197, 201-204  
 archaeology 76, 77, 82, 92, 95, 96  
 aspect-driven summarization 282, 290, 293  
 Association for Computational Linguistics (ACL) 24-27, 51-53, 72-74, 93, 94, 132-137, 140, 157-162, 181-183, 202-204, 228-231, 251-255, 273-276, 290-296, 306-308  
 automatic summarization 2, 25, 53, 68, 75, 97, 112, 129, 133-136, 140, 141, 145, 157-160, 163, 183, 185, 188, 206, 207, 226-230, 239, 250, 251, 259, 273, 292, 296-304  
 automatic summary evaluation 98, 102, 109, 110, 123, 128, 132, 156, 270, 271  
 automatic text summarization 2, 25, 73, 93, 98, 101, 102, 129, 133, 136, 137, 159, 160, 164, 166, 170, 180-188, 202, 204, 227-230, 233, 258, 259, 273-277, 291-295, 305

## B

bag-of-words approach 3, 5, 11-13, 20, 23, 46, 209-212, 234, 237, 302  
 BLEU evaluation metric 109-111, 115, 119, 123, 127, 128, 131, 135, 138, 270, 274, 289  
 burstiness score 152, 153  
 burst pattern 147, 149, 236, 240-243, 251-256  
 bursty subjects 236

## C

clustering methods 20, 193  
 contextual advertizing (CA) 27, 28, 132-136, 162, 183-192, 197, 200-204, 229, 309  
 convex polytopes 55, 71, 75  
 cross-language document summarization 53, 142, 255, 261, 275, 277, 293-296

## D

digital preservation 97  
 document clusters 7-10, 17, 18, 22, 31-34, 56, 57, 92, 95, 102, 126, 145, 148-152, 168-171, 178, 209-211, 217-220, 227, 236, 260, 261, 265-268, 272, 279, 286, 290  
 Document Understanding Conference (DUC) 2-4, 7-10, 13, 16-25, 29, 30, 34, 36, 41, 42, 45, 55, 67-75, 89, 93-95, 101, 102, 110, 113, 116, 118, 125-128, 132, 133, 155, 156, 171, 172, 181, 183, 202, 208, 210, 213, 226-231, 235, 238, 239, 256, 268-271, 274, 276, 279, 280, 292-296, 304-306, 309  
 domain-specific summarization 32, 54

## E

extractive multi-document summarization 25, 211  
 extractive summarization 3, 30-32, 54-58, 71-75, 166, 170, 180, 185, 207, 208, 228, 230, 233, 234, 239, 250, 252, 255, 265, 274, 299, 307

## F

feature selection 145, 202, 205

## G

generic summarization 29-34, 54, 137, 169, 175, 234, 255, 260

## H

hyperplanes 58-61, 65, 67, 71

## I

indicative summaries 102, 137, 259, 260

information extraction (IE) 76-78, 92, 94, 97, 141, 143, 154-157, 162, 163, 181, 187, 202, 210, 252, 279, 282, 291, 296, 300, 303, 306-309  
 information retrieval 24-27, 30, 32, 52, 53, 58, 72-74, 79, 93, 95, 101, 103, 106, 132-137, 141-147, 154, 158-162, 169, 173, 181-184, 187, 188, 195, 201-205, 226-231, 237, 243, 252-255, 266, 273-276, 291-296, 304-307  
 informative summaries 118, 137, 260  
 interactive summarization 97, 249  
 International Workshops on Semantic Evaluation (SemEval) 140

## K

keyword extraction 79, 80, 97, 252

## L

language-independent sentence features 255  
 language-independent summarization 34, 54, 224, 269, 297, 299  
 language-specific sentence features 255  
 latent semantic analysis (LSA) 24, 28, 91-94, 182, 203, 204, 229, 236, 273, 278-284, 287-295  
   parallel corpus 235, 278, 279, 286-290, 293  
   statistical machine translation 108, 141, 189, 278, 280, 286  
 linear optimization 75, 265  
 linear programming (LP) 55-57, 63, 67, 70-75, 210, 235, 251, 295  
 linguistics 5, 17-20, 25-28, 51-53, 66, 73, 74, 94, 97, 103, 132-137, 145, 157-162, 181-185, 202, 204, 213, 226-231, 251-255, 273-276, 292-296, 306, 308

## M

microblogging 147, 160, 163  
 mobile applications (Apps) 208, 223, 231  
 monolingual summarization 54, 297, 299  
 multi-document summarization (MDS) 1-4, 24-39, 49-57, 67, 68, 72-74, 95, 135, 143, 146, 159, 168, 173, 181-184, 188, 202, 210, 211, 225-234, 239, 249-255, 260, 265-269, 275-277, 292, 296, 307, 308  
 multi-document summarization (MDS), multilingual 278  
 multilingual document clustering 277  
 multilingual documents 258, 277

multilingual news summarization 206, 227, 273  
 Multilingual Sentence Extractor (MUSE) 35-40, 46, 50, 51, 54, 211, 234, 237, 238, 249, 250, 256, 265  
 multilingual summarization 52, 73, 182, 228, 231, 234, 258-261, 265-268, 272, 274, 277-280, 288-299, 308  
 multilingual summarization evaluation 279, 288, 293  
 multilinguism 309

## N

National Institute of Standards and Technology (NIST) 2-4, 22-25, 30, 51-54, 68, 72, 93, 94, 109, 110, 116, 125-135, 155, 181, 227, 228, 231, 251, 254-256, 271, 277, 291-296, 304, 305, 309  
 natural language processing methods 17, 26  
 natural language processing (NLP) 4, 5, 17-23, 26-28, 52, 53, 71-75, 89, 94-97, 103, 122, 128, 132-137, 140-145, 154, 157, 160, 162, 166, 170, 180-185, 202, 226-229, 251-255, 271-276, 281, 293, 297, 306-309  
 news summarization 52, 74, 142, 146, 165, 173, 176, 206-213, 225-235, 239, 254, 273, 291, 292, 296  
 NewSum summarization application 206-208, 213-225, 231  
 N-gram graph framework 4, 21, 37, 66, 68, 102, 108-111, 119, 131-134, 137, 138, 153, 171, 204, 206, 209-220, 225-228, 231, 236, 252, 254, 270-274, 290, 303, 307

## O

opinion summarization 73, 140, 144, 154, 155, 164, 165, 168-180, 185, 208

## P

parallel corpus 235, 278, 279, 286-290, 293  
 polyhedrons 61, 62, 75  
 polytopes 55-58, 61-65, 71-75  
 probabilistic topic modeling methods 12, 23, 26

## Q

query-based summarization 54, 72, 234, 256

## Index

### R

recall 12, 15, 30, 34-37, 45-50, 65, 68-71, 87-90, 99, 103-106, 110, 113, 114, 119, 122, 123, 131, 137, 152, 155, 156, 179, 180, 191-196, 200, 217, 238, 245, 269-271, 284

Recall-Oriented Understudy for Gisting Evaluation (ROUGE) 4, 10, 13, 16, 21, 22, 25, 27, 34, 37, 45-51, 54, 68, 71, 73, 89, 94, 110, 111, 116, 119, 123, 126-128, 131, 133, 138, 155, 156, 160, 171, 172, 178, 182, 185, 210, 235, 238, 239, 242, 256, 269-273, 284, 285, 289-291, 296, 304-309

redundancy 3, 6, 13, 26, 34, 35, 47, 57, 78, 144, 168-171, 185, 206-214, 218-220, 230, 282, 290, 300-302, 308

reference summaries 4, 21, 37, 68, 83, 84, 87-89, 101, 102, 111-118, 125, 129, 155, 180, 185, 270-272, 285, 304-306

ROUGE-1 scores 29, 30, 34, 46-50, 70, 238, 239, 271

ROUGE-2 scores 29, 35, 45, 46, 49, 50, 70, 129, 155, 156, 271, 289, 302-305

### S

sentence extraction 23, 70, 73-75, 81, 97-100, 135, 160, 204, 227, 229, 239, 275, 276, 293, 295, 299, 307

sentence ranking 1-17, 20-26, 32, 99, 234, 235, 263, 265

sentence relations (SentRel) multi-document summarization algorithm 29-32, 37-39, 44, 48-51

single document summarization 33, 71, 110, 168, 260, 277

singular value decomposition methods 11, 23, 26

social computing 163

social events 150, 163

social media 140-147, 150-163, 206, 208

social media, semantic analysis in 141, 157, 159, 162, 163

social media summarization 140-147, 156, 157, 163

social media text 143-146, 163

social networking service 163

stemming 5, 50, 57, 60, 71, 74, 75, 148, 198, 209, 215, 299

stop-words 5, 6, 13, 37, 50, 57, 66, 71, 75, 80, 123, 137, 166, 167, 173, 178, 185, 190, 198, 209, 262, 268, 285, 287, 299

SumBasic 27, 176, 185

summarization algorithms, supervised 54

summarization algorithms, unsupervised 54

summary evaluation 22, 24, 35-37, 94, 98-106, 109, 110, 118, 119, 123-128, 131-133, 136, 137, 156, 214, 229-234, 237, 268-272, 285-290

summary generation 3, 4, 8, 12, 13, 21, 23, 26, 31, 171, 259, 260, 302

supervised learning 6, 166, 167, 185

symmetric directed graph 38-40, 54

### T

temporal text mining 232, 233, 236, 240, 243, 252, 253, 256

Text Analysis Conferences (TAC) 2-7, 21-25, 29, 30, 34, 35, 40, 46-54, 73, 74, 89, 93, 94, 128-131, 135, 140, 155, 156, 159, 168, 171, 172, 181-185, 208, 213, 226-228, 231, 254-256, 268, 269, 272, 273, 277-296, 301, 305-309

Text Retrieval Conferences (TREC) 101, 106, 125, 126, 136, 140, 146, 155, 156, 228, 236, 251, 253

text summarization 2, 3, 11, 24-27, 30, 51, 55, 73, 74, 79, 81, 89-94, 97, 98, 101-105, 129, 132-137, 159, 160, 164-172, 175-205, 227-230, 233, 239, 250, 251, 254, 258-261, 265-269, 272-277, 291-298, 305-309

tokenization 137

Twitter 141-162, 170, 182, 250, 253

### U

update summarization 27, 140, 146, 156-159, 163, 227, 235, 243, 253, 292

user comments 145, 164, 168, 170

user-focused summary 137

### V

vector models 137, 212

VERT evaluation metric 119, 123-131

### W

word clustering 5, 8-10, 20, 23

word clustering methods 26

word frequency methods 26

word tokens 3-7, 83, 91, 137, 152, 216, 217, 236, 264, 299, 302, 303