COVID-19 DATA SETS

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1 COVID-19 medical image data sets

Table 1: Comparison of COVID-19 medical image data sets

Study	Application	Data Type	Machine Learning	Link
[1]	COVID-19 diagnosis	X-ray and CT Scan	Proposed Deep and transfer learning	https://github.com/ieee8023/covid-chestxray-dataset
[2]	COVID-19 diagnosis	CT scans	Deep Convolutional network	https://github.com/UCSD-AI4H/COVID-CT
[3]	COVID-19 diagnosis	CT scans	Deep Convolutional network, Transfer learning	https://ai.nscc-tj.cn/thai/deploy/public/pneumonia_ct
[4]	COVID-19 infected area segmentation	Segmented CT scans	Deep Convolutional Network	NA
[5]	COVID-19 infected area segmentation	Segmented CT scans	NA	https://zenodo.org/record/3757476
Medical segmentation	COVID-19 infected area segmentation	Segmented CT scans	U-Net model	http://medicalsegmentation.com/covid19/
Coronacases Initiative	COVID-19 diagnosis	3D CT scans	NA	https://coronacases.org/
BSTI	COVID-19 diagnosis and reference	Miscellaneous	NA	https://www.bsti.org.uk/training-and-education/covid-19-bsti-imaging-database/
SIRM	COVID-19 diagnosis and reference	Miscellaneous	NA	https://www.sirm.org/en/category/articles/covid-19-database/
Radiopaedia	COVID-19 diagnosis and reference	Miscellaneous	NA	https://radiopaedia.org/articles/covid-19-3
[6]	COVID-19 diagnosis	X-ray images	Deep Convolutional network, transfer learning	https://github.com/lindawangg/COVID-Net, https://github.com/agchung/Actualmed-COVID-chestxray-dataset
[7]	COVID-19 diagnosis	X-ray	Deep learning	https://github.com/ieee8023/covid-chestxray-dataset
[8]	COVID-19 diagnosis	X-ray	CNN and transfer learning	https://github.com/ieee8023/covid-chestxray-dataset + [9] + Kaggle convid19-X-rays
[10]	COVID-19 diagnosis, extract biomarkers	X-ray	CNN and transfer learning	[1] + SIRM + RSNA + Radiopaedia + [9]
[11]	COVID-19 diagnosis	X-ray	CNN	[1] + https://www.kaggle.com/paultimothymooney/chest-xray-pneumonia
[12]	COVID-19 diagnosis	X-ray	CNN + SVM	https://github.com/ieee8023/covid-chestxray-dataset + Kaggle + [9]
[13]	COVID-19 diagnosis	X-ray	Capsule network + Transfer learning	https://github.com/ShahinSHH/COVID-CAPS
[14]	COVID-19 diagnosis	X-ray	CNN + SVM	Cohen et al. [1]
[15]	COVID-19 data set augmentation	X-ray and CT Scan	NA	https://data.mendeley.com/datasets/8h65ywd2jr/3
[16]	COVID-19 diagnosis	X-ray	CNN	https://www.kaggle.com/tawsifurrahman/covid19-radiography-database
[17]	COVID-19 diagnosis	Ultra-sound	CNN	https://tinyurl.com/yckfqrcg

2 COVID-19 Case report data sets

Table 2: Comparison of COVID-19 case report data sets

Study	Application	Data Type	Statistical method	Link
[18]	Reporting global cases	COVID-19 cases	NA	https://github.com/CSSEGISandData/COVID-19
[19]	COVID-19 visual analysis	COVID-19 statistics	Exploratory data analysis	WHO + John Hopkins + Chinese Center for Disease Control and Prevention
[20]	COVID-19 city wise case analysis in China	COVID-19 statistics	NA	https://github.com/cheongsa/Coronavirus-COVID-19-statistics-in-China
[21, 22]	Reporting China cases	Location and epidemiological data	NA	https://github.com/beoutbreakprepared/nCoV2019/tree/master/latest_data
[23]	US county level data	348 socioeconomic parameters	proposed ML for epidemiological analysis	https://github.com/JieYingWu/COVID-19_US_County-level_Summaries
[24]	Estimating new cases	COVID-19 cases	stochastic transmission dynamic	https://github.com/adamkucharski/2020-ncov/
[25]	COVID-19 spread	COVID-19 statistics	ARIMA	https://github.com/CSSEGISandData/COVID-19
[26]	Correcting underreported cases	Reported case and world demographics	Statistical	https://tinyurl.com/y7hbpl96
[27]	Mobility-transmission analysis	Mobility and epidemiological data	Statistical	https://github.com/Emergent-Epidemics/covid19_npi_china
[28]	Cases exported from China	epidemiological data set	Statistical	http://www.mdpi.com/2077-0383/9/2/601/s1
[29]	Effect of NPI on COVID-19 in China	Location and epidemiological data	NA	https://github.com/wpgp/BEARmod
[30]	Effect of NPI on COVID-19 in Europe	Location and epidemiological data	semi-mechanistic Bayesian hierarchical model	https://github.com/ImperialCollegeLondon/covid19model/releases/tag/v1.0
[31]	International travel control analysis	COVID-19 statistics, flight data	Statistical	https://github.com/WellsRC/Coronavirus-2019
[32]	COVID-19 Transmission control analysis	COVID-19 statistics	regression analysis	https://github.com/huaiyutian/COVID-19_TCM-50d_China
[33]	Community transmission	COVID-19 cases	Expectation-maximization	https://github.com/carolinecolijn/ClustersCOVID19
[34]	Community transmission	COVID-19 cases (dates)	maximum likelihood fitting and the Akaike information criterion	https://github.com/MeyersLabUTexas/COVID-19
[35]	Community transmission	COVID-19 cases (dates)	Bayesian approach	https://github.com/aakhmetz/nCoVSerialInterval2020

3 COVID-19 Social media and scholarly article data sets

Table 3: Comparison of COVID-19 social media and scholarly article data sets

Study	Application	Data Type	Statistical method	Link
[36]	Measuring emotions	Textual data	statistical analysis (correlation and regression)	https://github.com/ben-aaron188/covid19worry
[37]	Social dynamics data	Tweets	Statistical analysis	https://github.com/thepanacealab/covid19_twitter
[38]	Conversation dynamics	Tweets	NA	https://github.com/echen102/COVID-19-TweetIDs
[39]	Societal issues	Tweets (arabic)	NA	https://github.com/SarahAlqurashi/COVID-19-Arabic-Tweets-Dataset
[40]	Government and Media Tweets	Tweets	NA	https://tinyurl.com/y9w3nlnh
[41]	Perception and policies	Tweets	Proposed NLP, data mining	https://github.com/lopezbec/COVID19_Tweets_Dataset
[42]	Fake new identification	Instagram posts	NA	https://github.com/kooshazarei/COVID-19-InstaPostIDs
[43]	COVID-19 symptoms identification	Tweets	Data mining	https://sarkerlab.org/covid_sm_data_bundle/
[44]	Collecting published articles on COVID-19	Published articles	Proposed data extraction, retrieval mining	https://www.semanticscholar.org/cord19/download
[45]	Analyzing published articles on COVID-19	Published articles	Statistical analysis	https://tinyurl.com/y9aam6bs
[46]	Systematic review of COVID-19 diagnosis articles	Published articles	CHARM and PROBAST tools	https://osf.io/ehc47/
COVID Scholar	NLP based search portal	Published articles	NLP	https://covidscholar.org

4 COVID-19 Mobility and NPI data sets

Table 4: Comparison of COVID-19 Mobility and NPI data sets

Type	Organization	Application	Source	Coverage	Format	Link
Mobility	Google	Analyze response to the pandemic	Google location service	Global	CSV and dashboard	https://www.google.com/covid19/mobility/
	Apple	Analyze mobility patterns in the pandemic	Apple location service	Global	CSV and dashboard	https://www.apple.com/covid19/mobility
	GeoDS lab	Investigate travel changes at U.S. county level	Descartes Labs and SafeGraph	U.S.	Dashboard	https://geods.geography.wisc.edu/covid19/physical-distancing/
	Baidu Inc.	Investigate migration changes in China	Baidu location service	China	Dashboard	http://qianxi.baidu.com/
NPI	Oxford University [47]	Investigate NPI stringency	Media and gov. reports	Global	CSV and dashboard	https://github.com/OxCGRT/covid-policy-tracker
	A volunteer group	Investigate effectiveness of NPI	Our World in Data	Global	CSV and dashboard	https://www.kaggle.com/davidoj/covid19-national-responses-dataset
	ACAPS	Investigate NPI	Media and gov. reports	Global	CSV and dashboard	https://www.acaps.org/projects/covid19/data

5 COVID-19 Speech data sets

Table 5: Comparison of COVID-19 Speech data sets

Study	Application	Data Type	ML method	Sample size	Link
[48]	Cough based COVID-19 diagnosis	Voice data	Deep and ML classifiers	NA	NA
[49]	Cough and breath based COVID-19 diagnosis	Voice data	Logistic Regression, Gradient Boosting Trees, and SVM	7000	https://www.covid-19-sounds.org/en/
[50]	Cough, breath, and speech based COVID-19 diagnosis	Voice data	NA	approx. 1000	https://github.com/iiscleap/Coswara-Dat
Virufy	Cough based COVID-19 diagnosis	Voice data	NA	16	https://github.com/virufy/covid
[51]	Breath based COVID-19 diagnosis transmission	Voice data	NA	NA	NA
[52]	Lung disease classification	Breath samples	Stacked AutoEncoders, Long Short Term Memory Network, and CNN	150	NA
[53]	COVID-19 speech analysis	Voice data	SVM with linear kernel	52	NA

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