

Supporting Information

Machine learning-based prediction of COVID-19 cases in 75 countries using Google Trends

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Table S1. Pearson correlations between WHO and Worldometer reported cases (all p-values < 0.05 and are extremely small indicating higher correlated relationships)

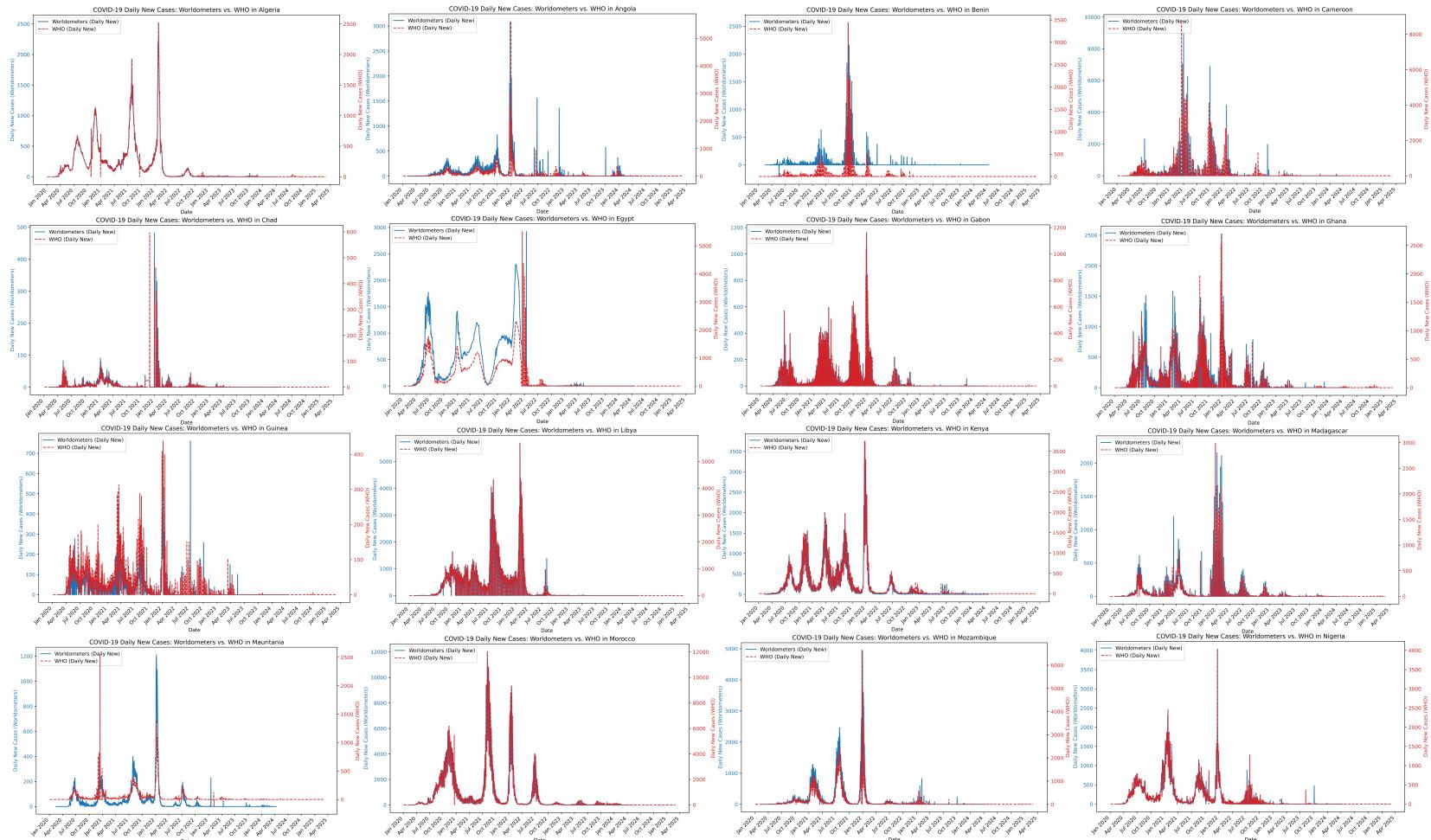
Pearson's coefficient	Country	Between WHO and Worldometer cases
Africa	Algeria	1.00
	Angola	0.96
	Benin	0.89
	Cameroon	0.60
	Chad	0.85
	Egypt	1.00
	Gabon	0.98
	Ghana	0.96
	Guinea	0.96
	Kenya	1.00
	Libya	1.00
	Madagascar	0.97
	Mauritania	0.98
	Morocco	1.00
	Mozambique	0.99
	Niger	0.89
	Nigeria	1.00
	Rwanda	1.00
	Senegal	1.00
	Somalia	0.81
	Sudan	0.96
	Tanzania	0.28
	Tunisia	0.99
	Uganda	0.76
	Zambia	1.00
Americas	Argentina	1.00
	Brazil	0.99
	Canada	0.99
	Chile	1.00
	Colombia	1.00
	Costa Rica	0.78
	Dominican Republic	0.99
	El Salvador	0.55
	Mexico	0.95
	Peru	0.99
	Uruguay	0.99
	USA	0.99
Asia and Oceania	Australia	0.99
	Bahrain	1.00
	Bangladesh	1.00
	Cambodia	1.00
	Israel	1.00
	Japan	1.00
	Kazakhstan	1.00
	Kuwait	1.00
	New Zealand	0.96

	Pakistan	1.00
	Saudi Arabia	1.00
	Singapore	0.99
	South Korea	1.00
	Thailand	1.00
	Türkiye	0.99
	United Arab Emirates	1.00
	Vietnam	0.98
Europe	Austria	1.00
	Bulgaria	0.98
	Czechia	1.00
	Denmark	1.00
	Finland	0.96
	France	0.98
	Germany	0.99
	Greece	0.96
	Hungary	1.00
	Iceland	0.95
	Italy	1.00
	Netherlands	0.99
	Norway	1.00
	Poland	1.00
	Portugal	0.98
	Russia	1.00
	Slovakia	0.79
	Slovenia	0.98
	Spain	0.99
	Sweden	1.00
	United Kingdom	1.00

Table S2. Pearson correlations between Google Trends data and Worldometer reported cases (p-value < 0.05, “ns” indicates insignificant p-values)

Pearson's coefficient	Country	Local/native language	English language	Local/native + English language
Africa	Algeria	0.52	0.43	0.50
	Angola	ns	0.29	ns
	Benin	0.58	0.27	0.51
	Cameroon	0.38	0.10	0.29
	Chad	ns	0.11	ns
	Egypt	0.35	0.12	0.30
	Gabon	0.42	0.31	0.40
	Ghana	0.42	0.15	0.34
	Guinea	0.28	0.15	0.29
	Kenya	ns	0.15	ns
	Libya	0.41	ns	0.34
	Madagascar	0.40	0.39	0.45
	Mauritania	ns	0.17	0.11
	Morocco	0.38	0.16	0.29
	Mozambique	0.23	0.20	0.26
	Niger	0.17	0.19	0.25
	Nigeria	0.36	0.17	0.29
	Rwanda	0.25	0.35	0.35
	Senegal	0.48	0.26	0.42
	Somalia	ns	0.09	ns
	Sudan	0.19	0.21	0.21
	Tanzania	0.17	0.22	0.20
	Tunisia	0.40	0.43	0.44
	Uganda	0.53	0.12	0.35
	Zambia	0.37	0.13	0.29
Americas	Argentina	0.36	0.49	0.44
	Brazil	0.28	0.45	0.42
	Canada	0.31	0.25	0.29
	Chile	0.31	0.09	0.22
	Colombia	0.62	0.52	0.62
	Costa Rica	0.19	0.12	0.17
	Dominican Republic	0.30	0.28	0.32
	El Salvador	0.18	ns	0.11
	Mexico	0.38	0.35	0.39
	Peru	0.32	0.24	0.30
	Uruguay	0.36	0.41	0.41
	USA	0.41	0.40	0.42
Asia and Oceania	Australia	0.54	ns	0.22
	Bahrain	0.08	ns	0.08
	Bangladesh	0.11	0.40	0.26
	Cambodia	ns	0.42	0.30
	Israel	ns	0.19	0.14
	Japan	0.21	0.22	0.23
	Kazakhstan	ns	0.39	0.26

	Kuwait	0.31	0.23	0.31
	New Zealand	0.39	ns	0.11
	Pakistan	0.45	0.53	0.56
	Saudi Arabia	0.52	0.19	0.43
	Singapore	0.07	ns	ns
	South Korea	0.25	ns	0.08
	Thailand	0.41	0.45	0.44
	Türkiye	ns	0.37	0.23
	United Arab Emirates	0.50	0.40	0.48
	Vietnam	0.19	0.24	0.22
Europe	Austria	0.03	ns	ns
	Bulgaria	-0.01	0.49	0.36
	Czechia	0.56	0.40	0.50
	Denmark	0.38	0.16	0.29
	Finland	0.28	0.24	0.29
	France	0.47	0.17	0.31
	Germany	0.08	ns	ns
	Greece	ns	0.15	ns
	Hungary	ns	0.56	0.43
	Iceland	0.07	0.18	0.13
	Italy	0.30	0.21	0.26
	Netherlands	ns	0.28	0.21
	Norway	0.19	0.42	0.33
	Poland	ns	0.64	0.51
	Portugal	0.13	0.16	0.16
	Russia	ns	0.29	0.15
	Slovakia	ns	0.26	0.17
	Slovenia	ns	0.22	0.16
	Spain	0.35	0.37	0.38
	Sweden	0.09	0.44	0.31
	United Kingdom	0.42	0.48	0.47



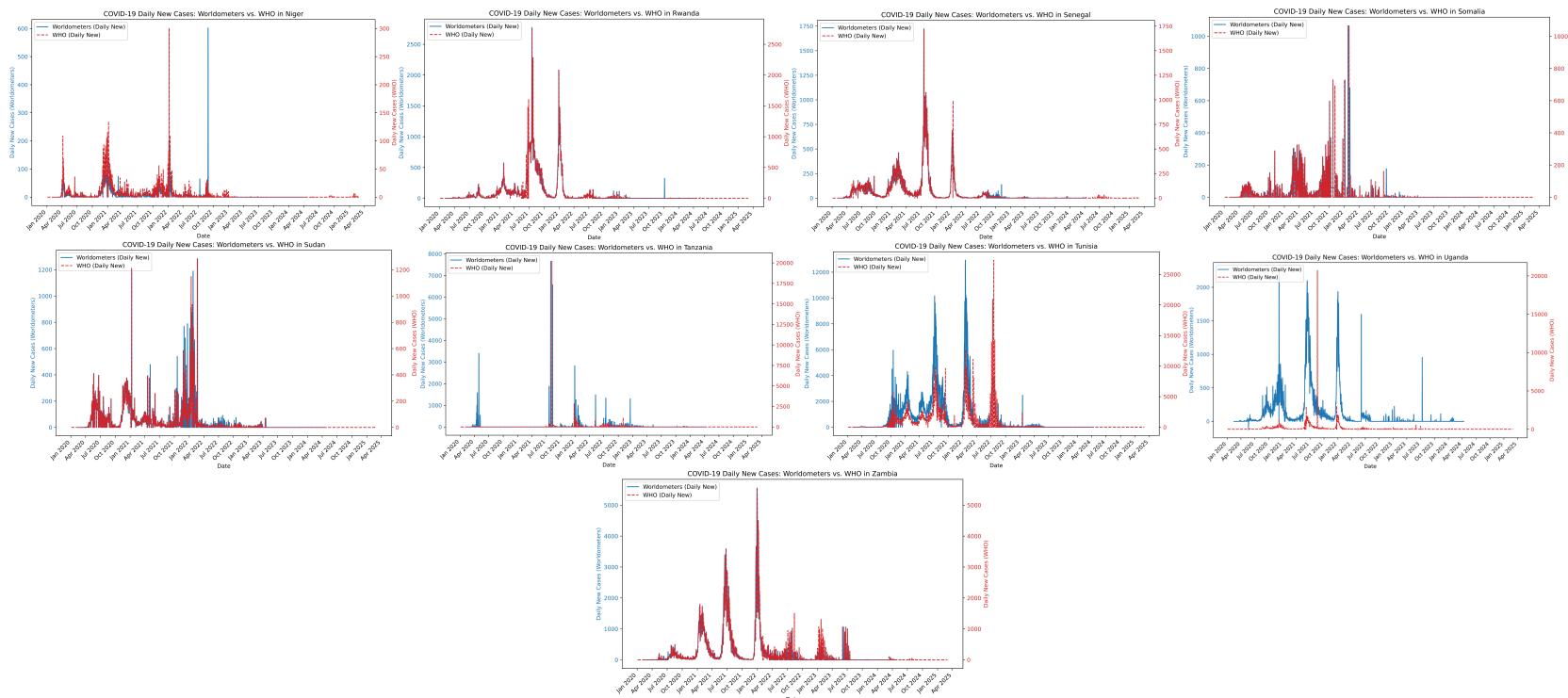
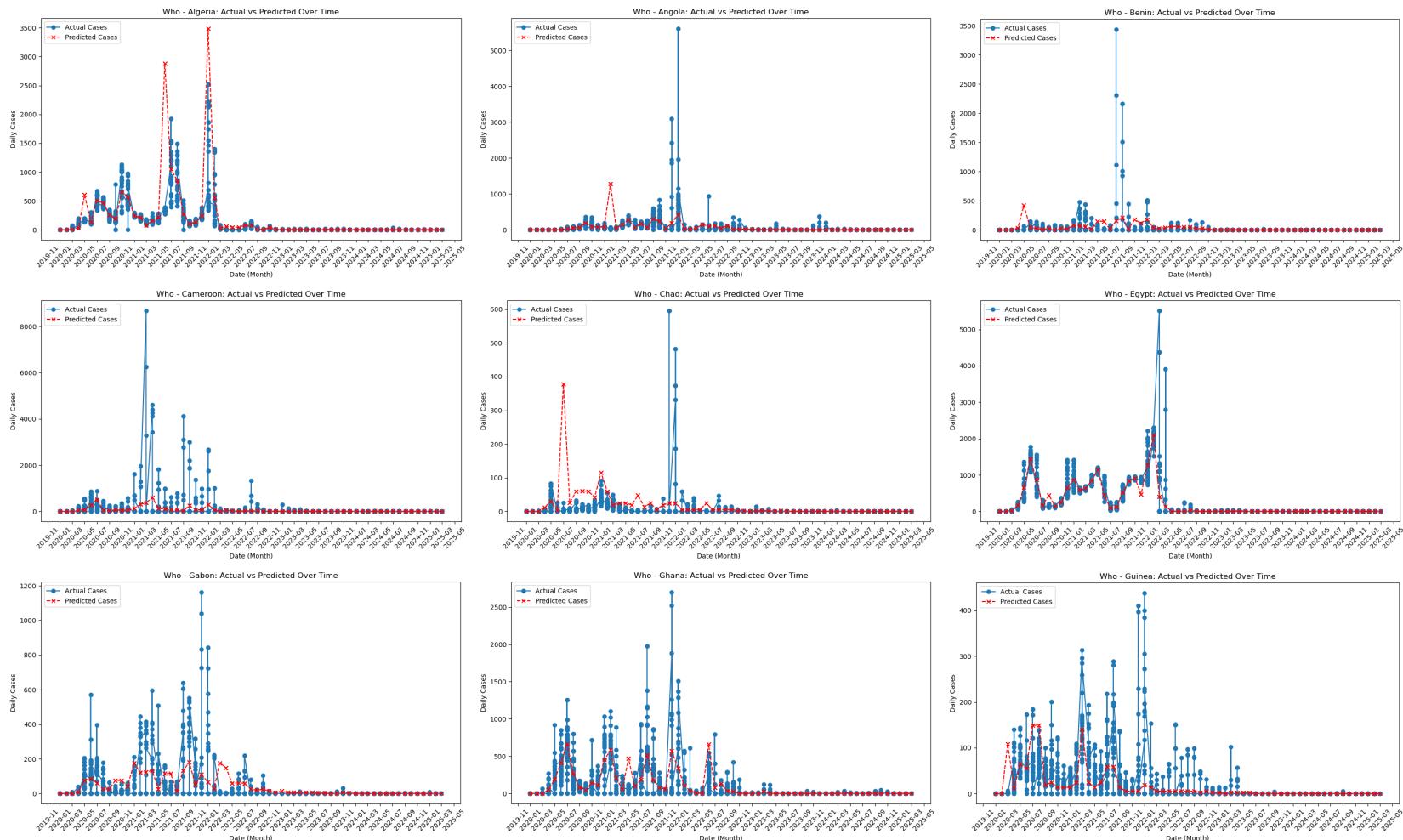
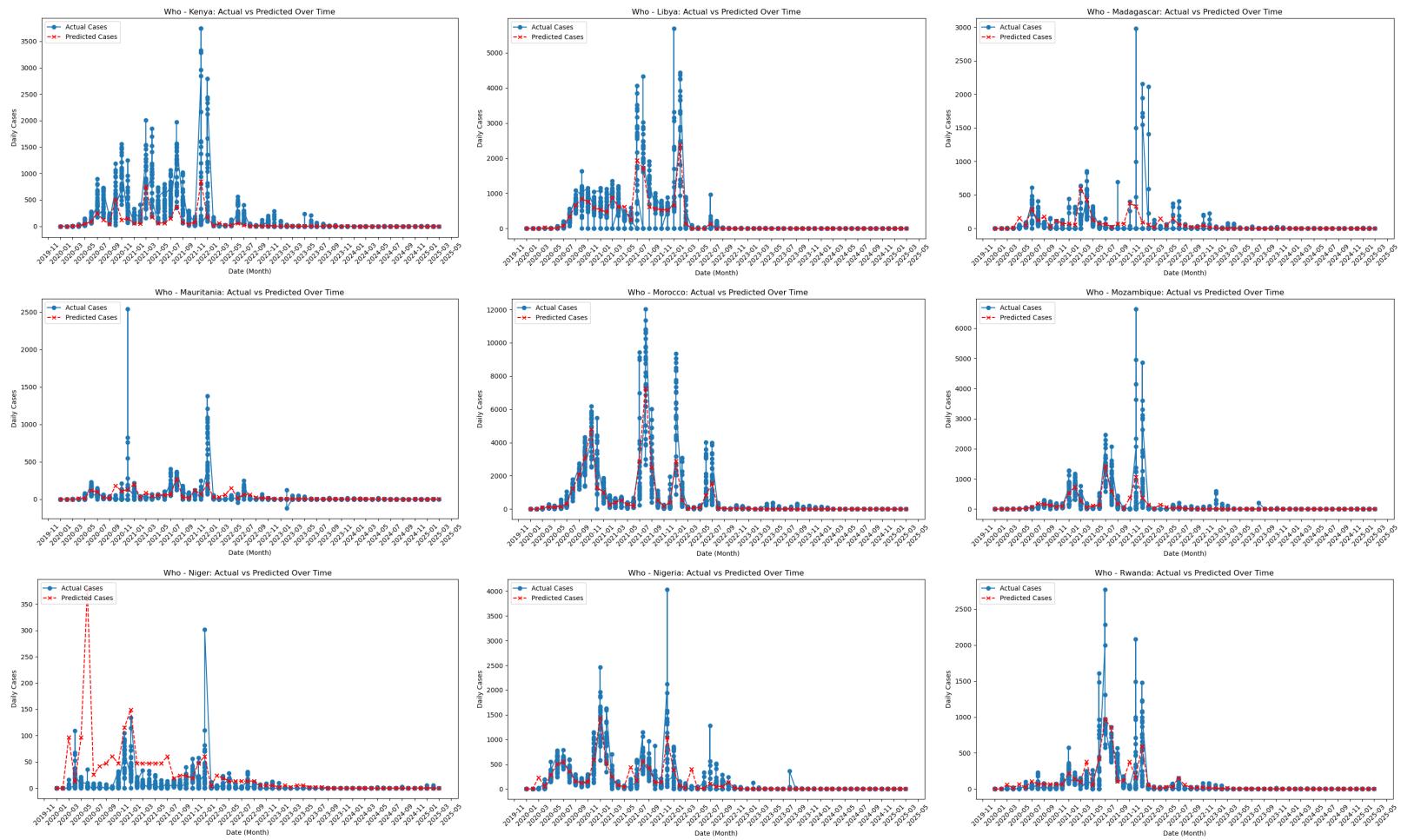


Figure S1. Daily reported COVID-19 cases by WHO and Worldometer (Africa)





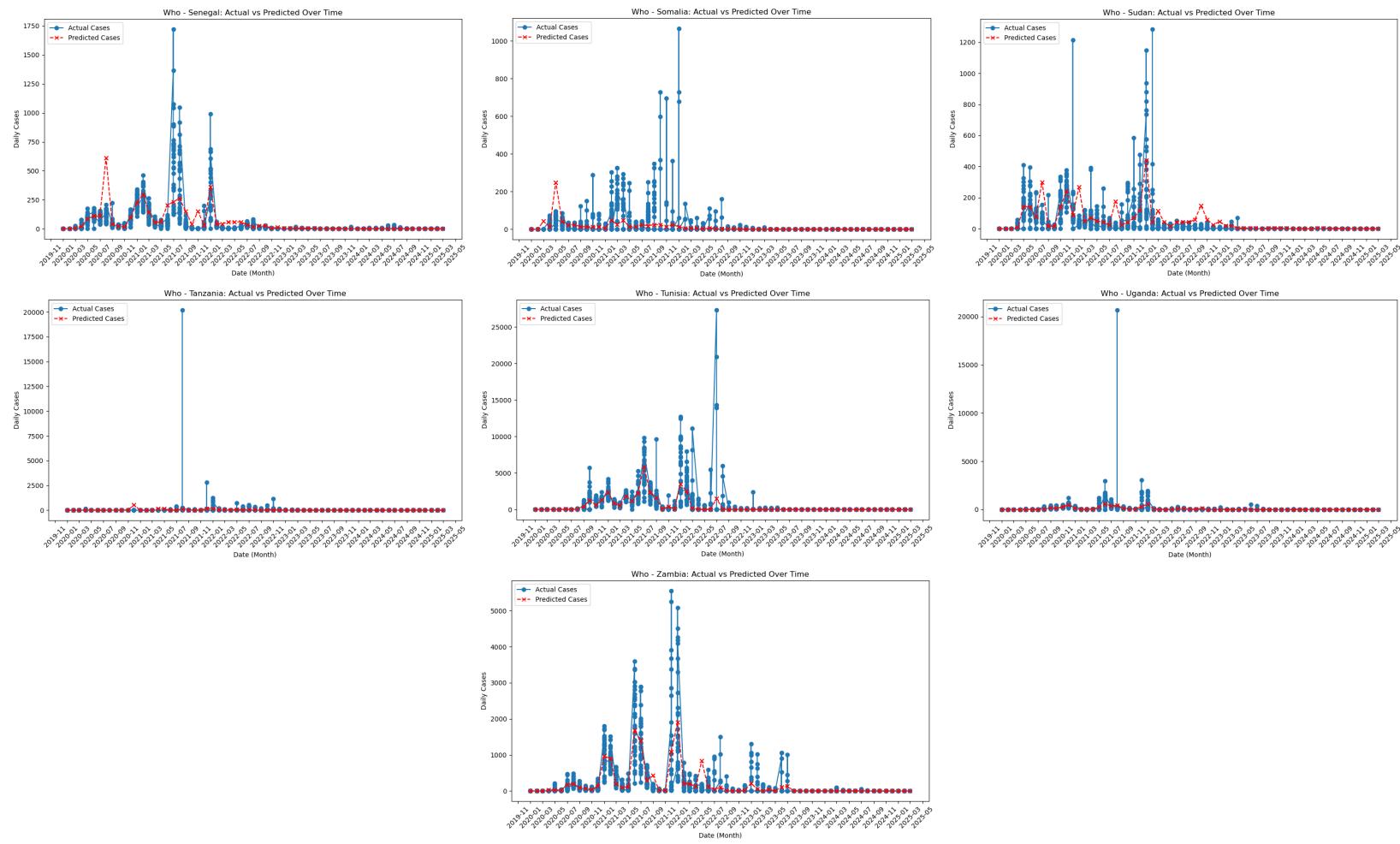
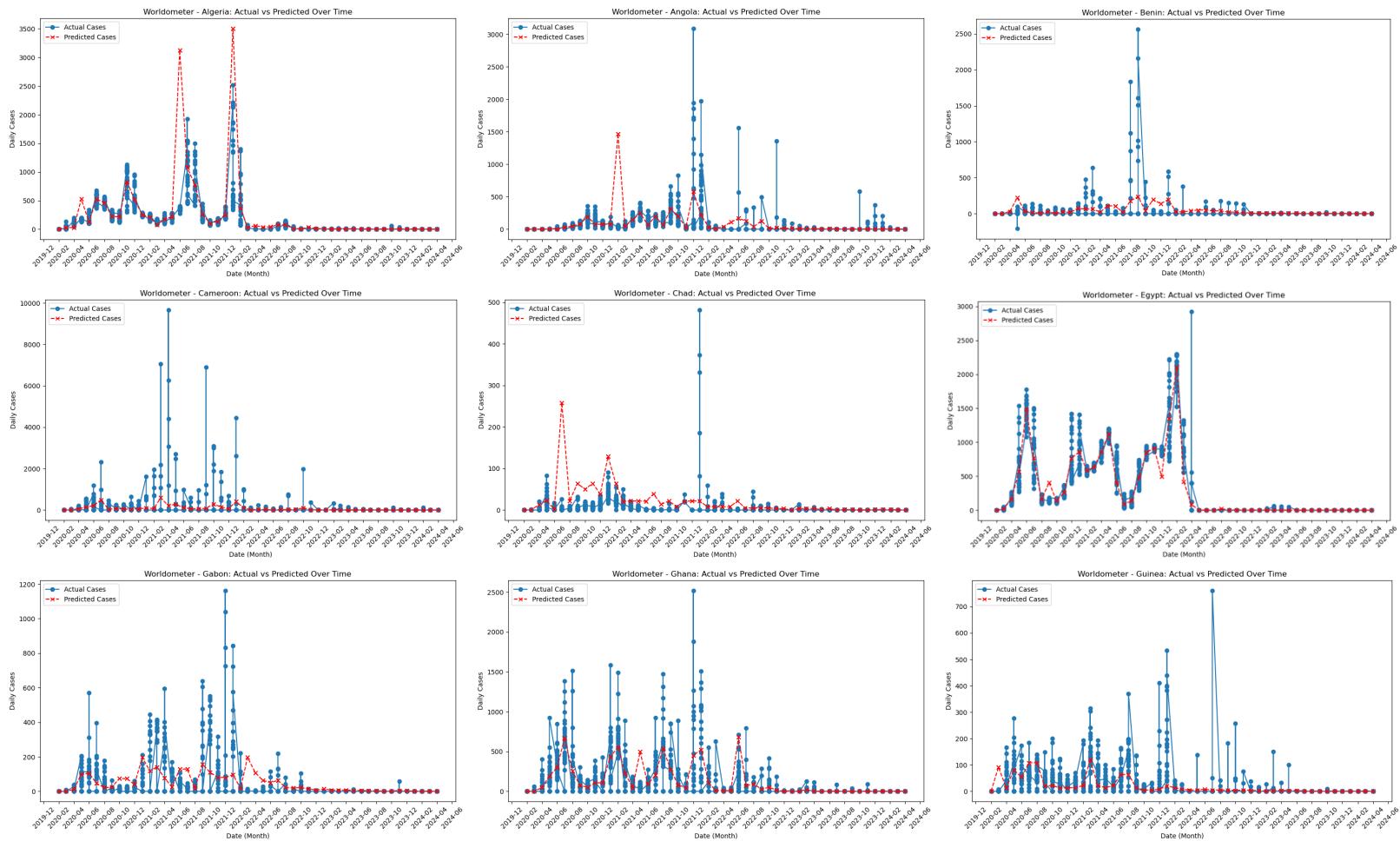
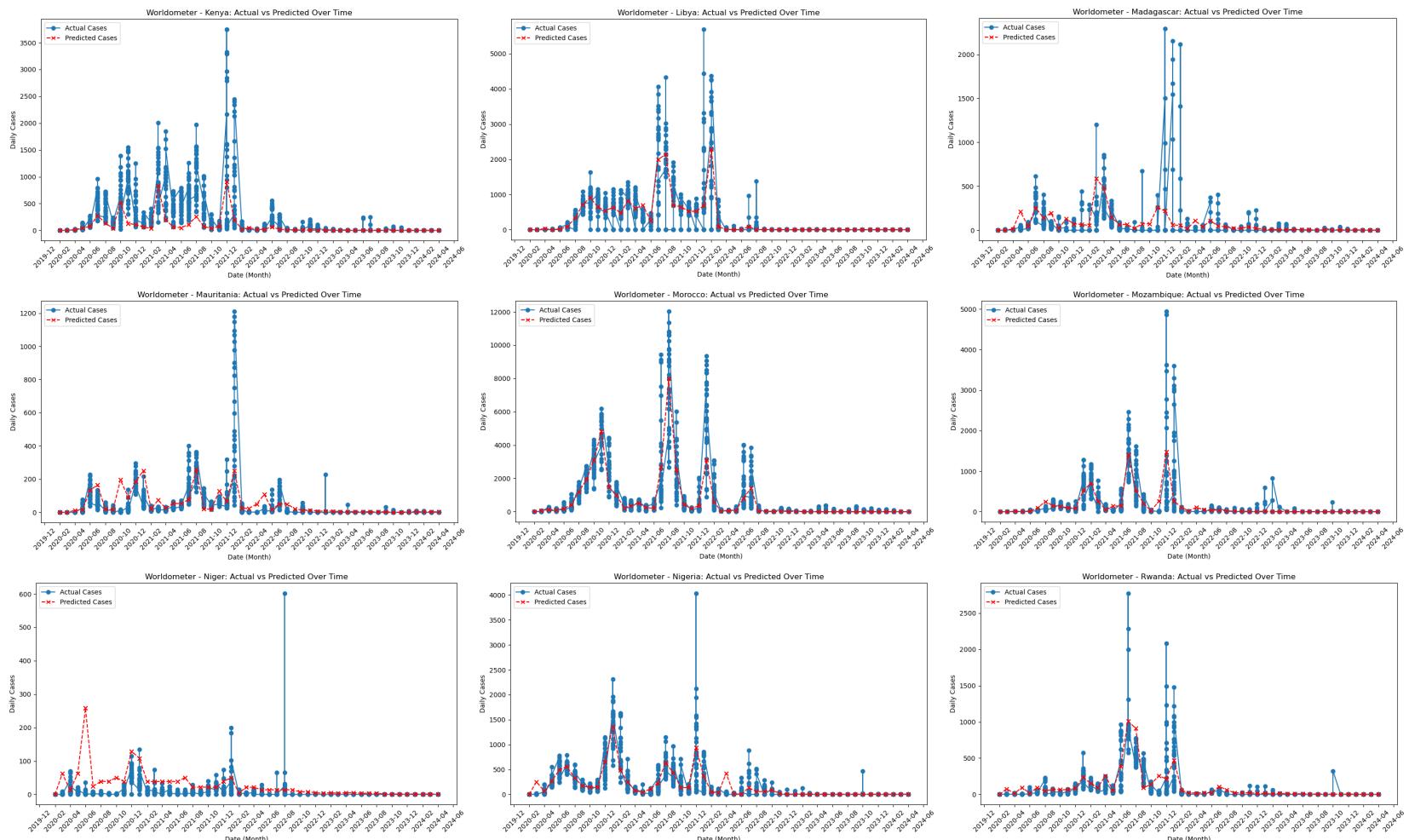


Figure S2. Predicted and WHO cases (Africa)





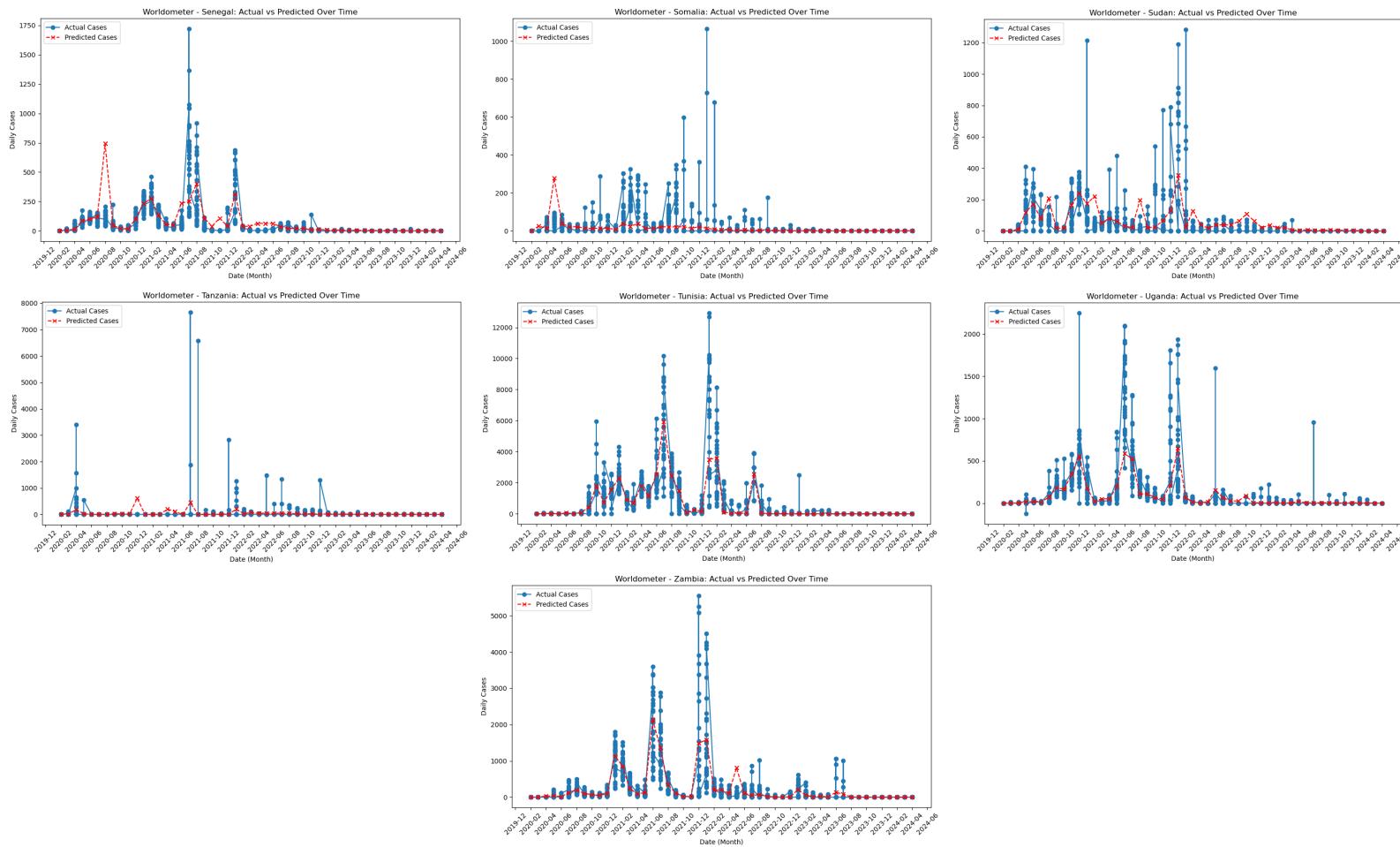


Figure S3. Predicted and Worldometer cases (Africa)

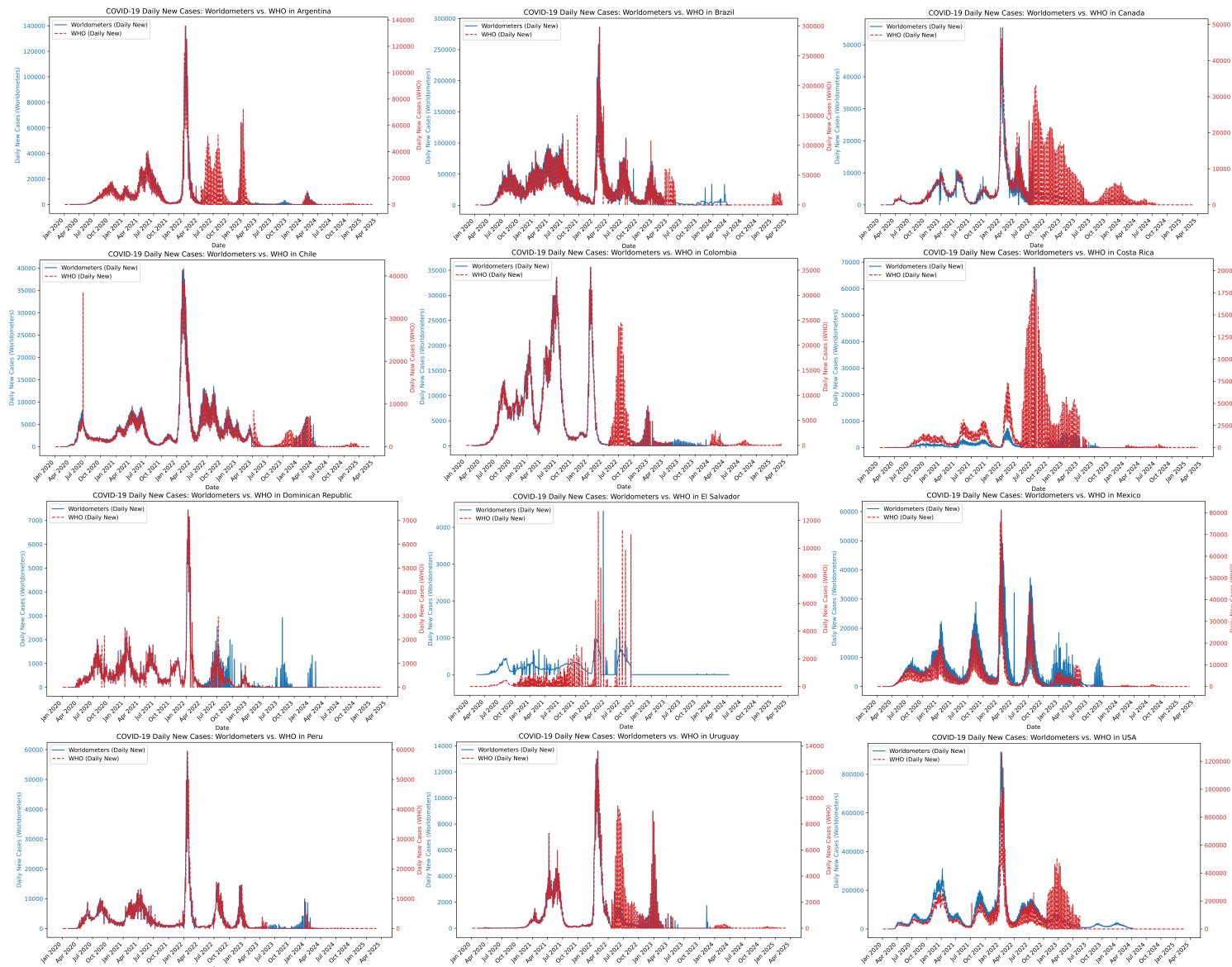


Figure S4. Daily reported COVID-19 cases by WHO and Worldometer (Americas)

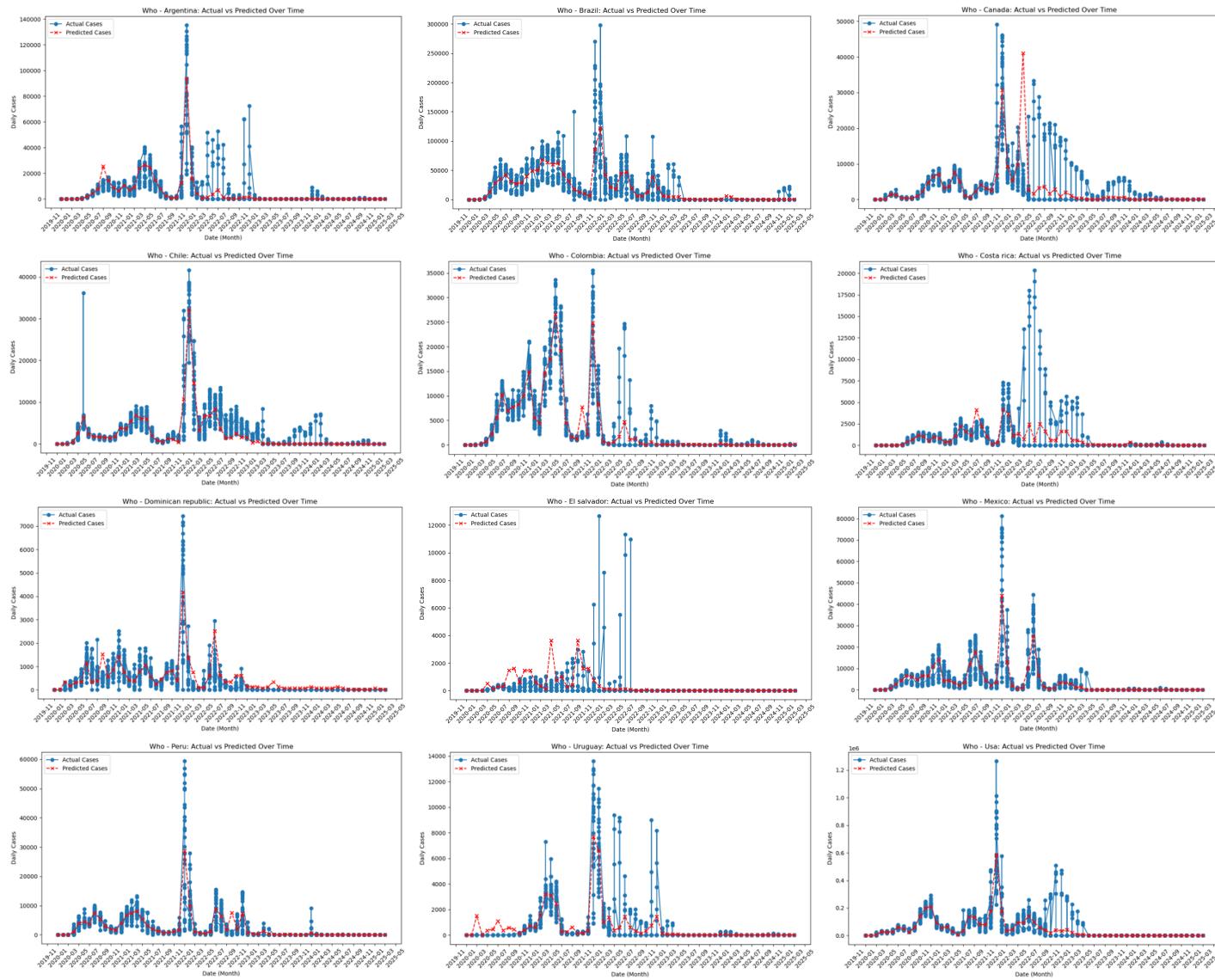


Figure S5. Predicted and WHO cases (Americas)

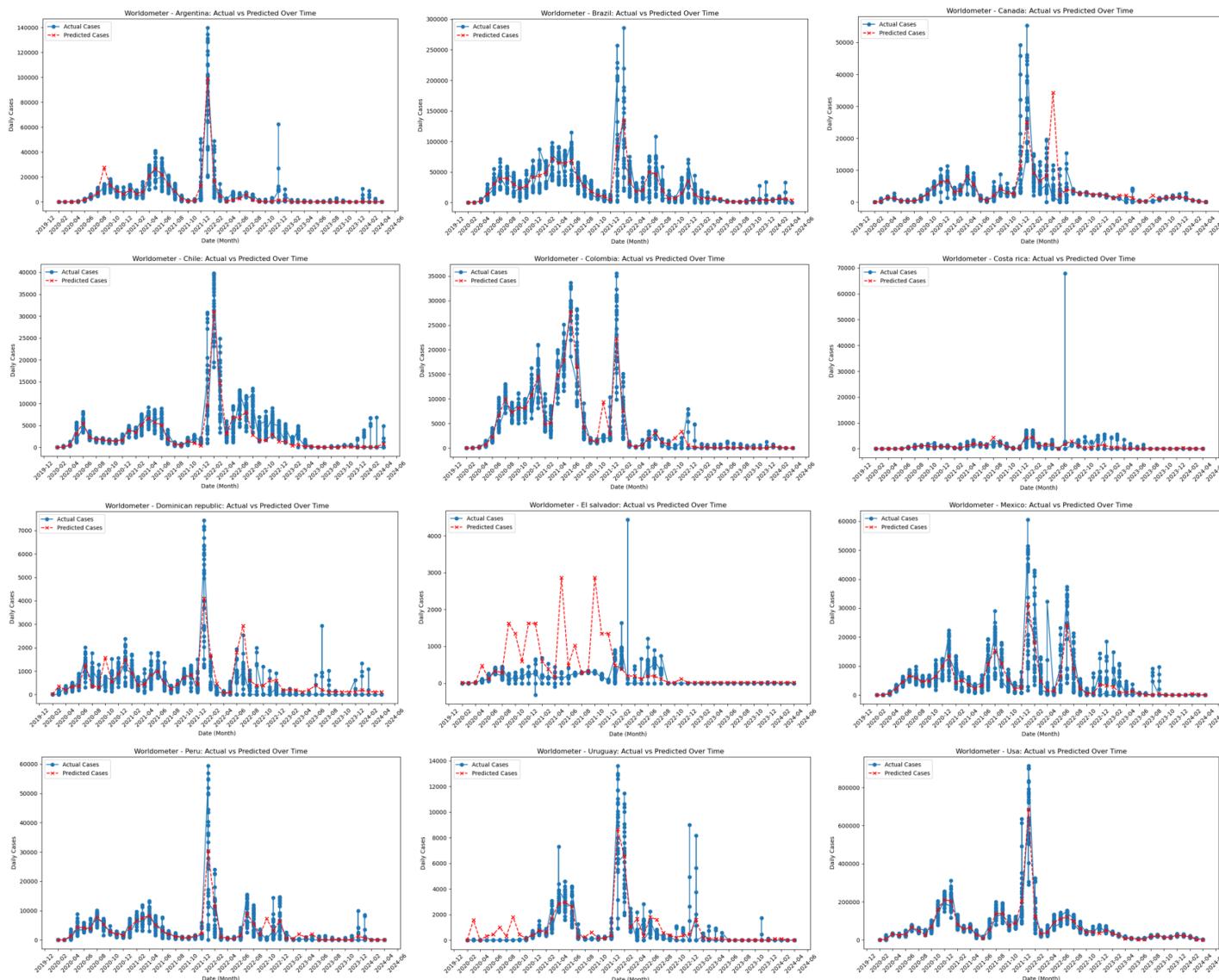


Figure S6. Predicted and Worldometer cases (Americas)