

Earthquake magnitude forecast: 6.0+ probability for JAPAN.WHOLE



Zone coordinates

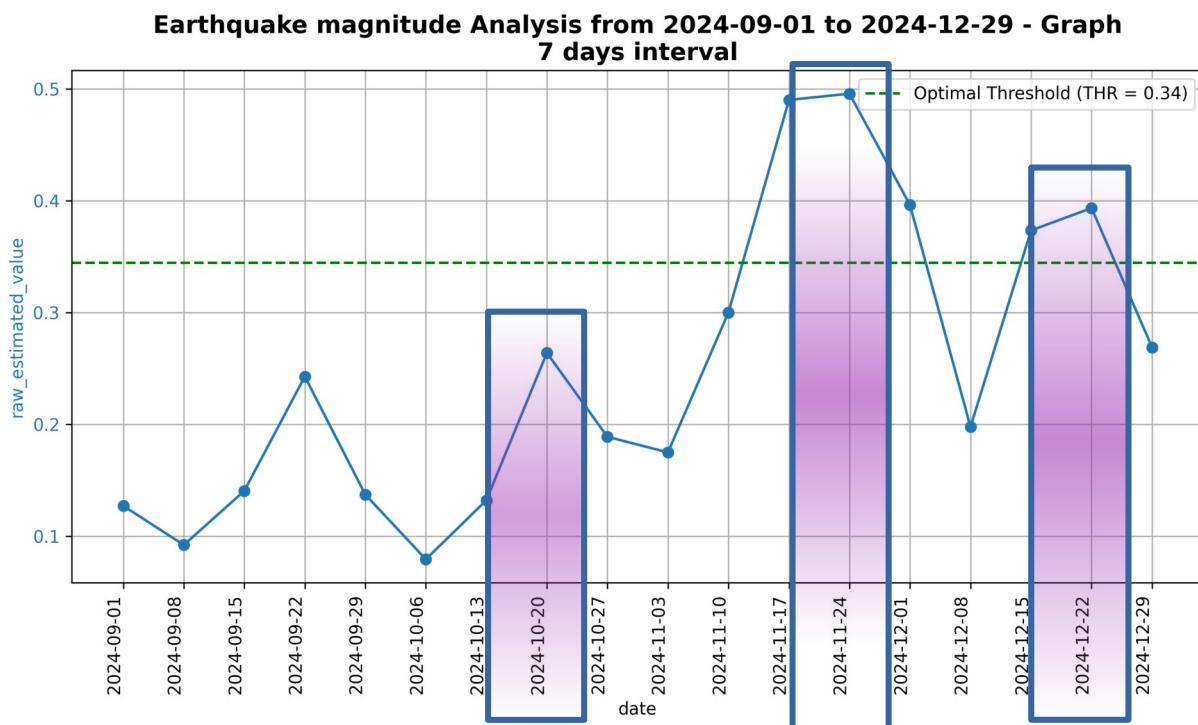
Zone	min Latitude	max Latitude	min Longitude	max Longitude
Zona 1	29.51	44.98	128.87	144.94
Zona 2	29.51	44.98	128.87	144.94
Zona 3	29.51	44.98	128.87	144.94
Zona 4	29.51	44.98	128.87	144.94
Zona 5	29.51	44.98	128.87	144.94
Zona 6	29.51	44.98	128.87	144.94
Zona 7	29.51	44.98	128.87	144.94
Zona 8	29.51	44.98	128.87	144.94
Zona 9	29.51	44.98	128.87	144.94
Zona 10	29.51	44.98	128.87	144.94

Estimated area for period :
2024-10-20 to 2024-10-27 (UTC time)



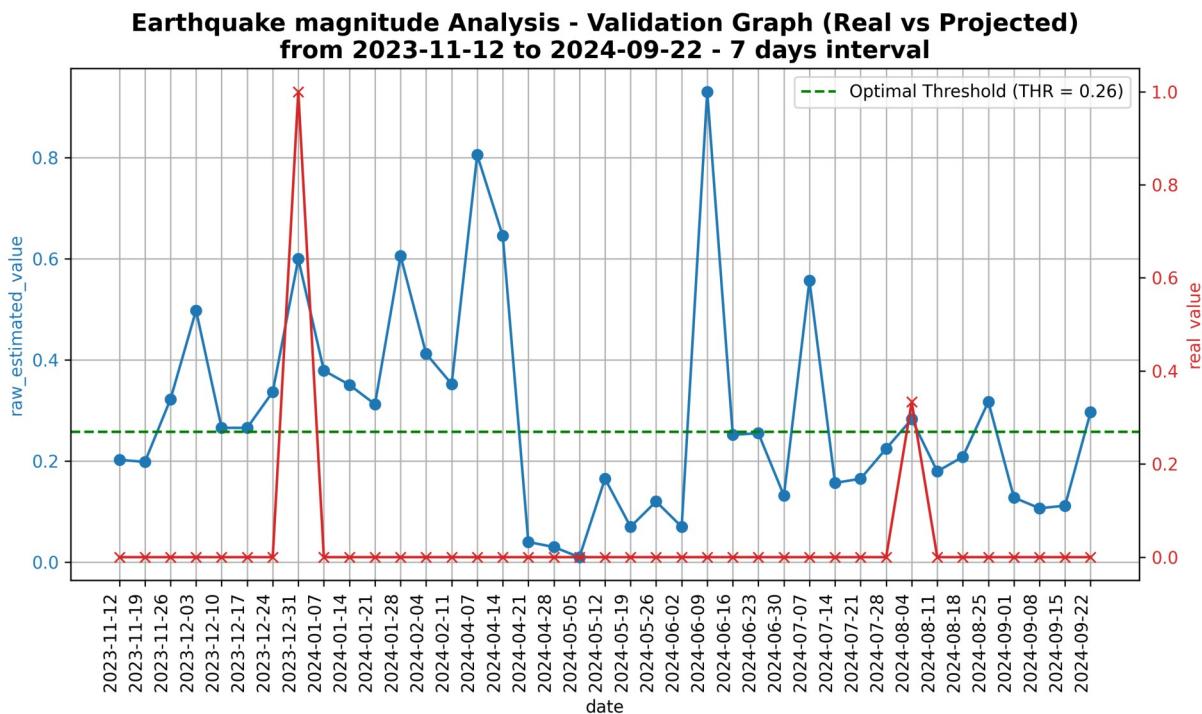
Zone 1 : 70%

Zone 2 : 30%



**Earthquake magnitude Analysis from 2024-09-01 to 2024-12-29 - Table
 7 days interval**

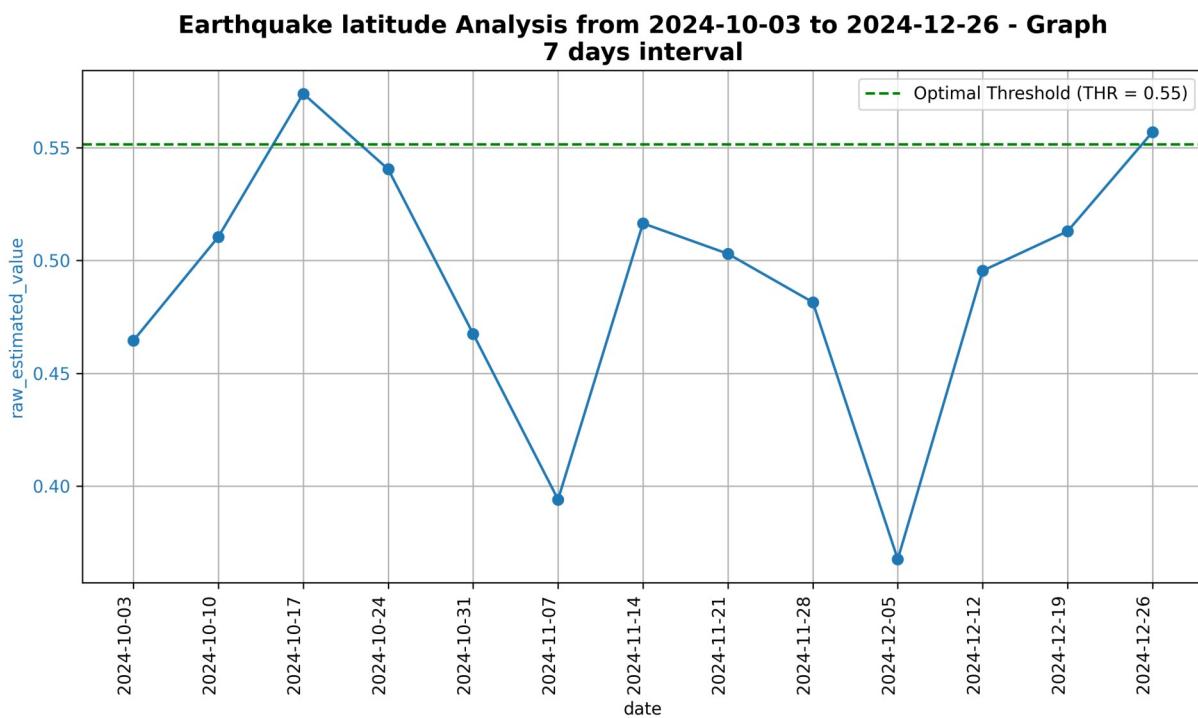
date	raw_estimated_va	fpr	fnr	avg_days	threshold	Optimal_THR	Optimal_fPr	Optimal_fnr
2024-09-01	0.13	0.36	0.14	12.44	0.32	0.34	0.25	0.25
2024-09-08	0.09	0.36	0.14	12.44	0.32	0.34	0.25	0.25
2024-09-15	0.14	0.36	0.14	12.44	0.32	0.34	0.25	0.25
2024-09-22	0.24	0.36	0.14	12.44	0.32	0.34	0.25	0.25
2024-09-29	0.14	0.36	0.14	12.44	0.32	0.34	0.25	0.25
2024-10-06	0.08	0.36	0.14	12.44	0.32	0.34	0.25	0.25
2024-10-13	0.13	0.36	0.14	12.44	0.32	0.34	0.25	0.25
2024-10-20	0.26	0.36	0.14	12.44	0.32	0.34	0.25	0.25
2024-10-27	0.19	0.36	0.14	12.44	0.32	0.34	0.25	0.25
2024-11-03	0.17	0.36	0.14	12.44	0.32	0.34	0.25	0.25
2024-11-10	0.30	0.36	0.14	12.44	0.32	0.34	0.25	0.25
2024-11-17	0.49	0.36	0.14	12.44	0.32	0.34	0.25	0.25
2024-11-24	0.50	0.36	0.14	12.44	0.32	0.34	0.25	0.25
2024-12-01	0.40	0.36	0.14	12.44	0.32	0.34	0.25	0.25
2024-12-08	0.19	0.36	0.14	12.44	0.32	0.34	0.25	0.25
2024-12-15	0.37	0.36	0.14	12.44	0.32	0.34	0.25	0.25
2024-12-22	0.39	0.36	0.14	12.44	0.32	0.34	0.25	0.25
2024-12-29	0.27	0.36	0.14	12.44	0.32	0.34	0.25	0.25



Earthquake magnitude Analysis - Validation Time Table (Real vs Projected) from 2023-11-12 to 2024-09-22 - 7 days interval

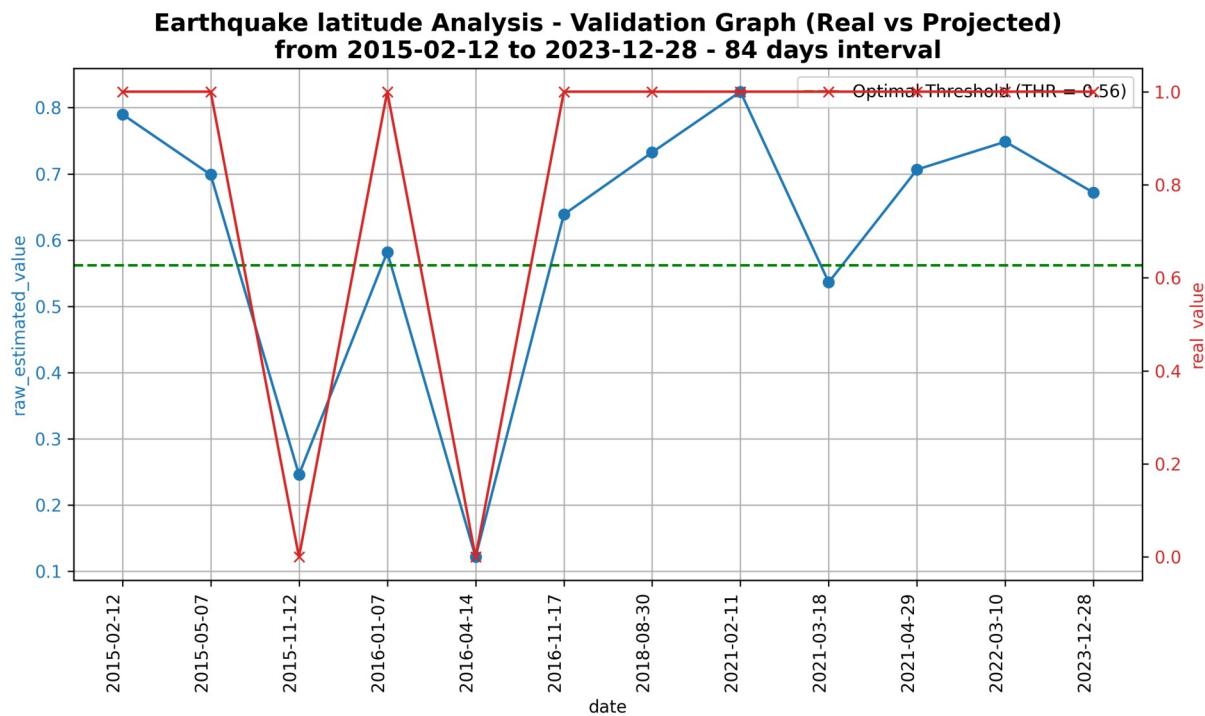
date	real_value	raw_estimated_val	fpr	fnr	threshold	Optimal_THRESHOLD	Optimal_fPr	Optimal_fNr
2023-11-12	0.00	0.2	0.36	0.14	0.32	0.34	0.25	0.25
2023-11-19	0.00	0.2	0.36	0.14	0.32	0.34	0.25	0.25
2023-11-26	0.00	0.32	0.36	0.14	0.32	0.34	0.25	0.25
2023-12-03	0.00	0.5	0.36	0.14	0.32	0.34	0.25	0.25
2023-12-10	0.00	0.27	0.36	0.14	0.32	0.34	0.25	0.25
2023-12-17	0.00	0.27	0.36	0.14	0.32	0.34	0.25	0.25
2023-12-24	0.00	0.34	0.36	0.14	0.32	0.34	0.25	0.25
2023-12-31	1.00	0.6	0.36	0.14	0.32	0.34	0.25	0.25
2024-01-07	0.00	0.38	0.36	0.14	0.32	0.34	0.25	0.25
2024-01-14	0.00	0.35	0.36	0.14	0.32	0.34	0.25	0.25
2024-01-21	0.00	0.31	0.36	0.14	0.32	0.34	0.25	0.25
2024-01-28	0.00	0.61	0.36	0.14	0.32	0.34	0.25	0.25
2024-02-04	0.00	0.41	0.36	0.14	0.32	0.34	0.25	0.25
2024-02-11	0.00	0.35	0.36	0.14	0.32	0.34	0.25	0.25
2024-04-07	0.00	0.81	0.15	0.50	0.11	0.10	0.32	0.32
2024-04-14	0.00	0.64	0.15	0.50	0.11	0.10	0.32	0.32
2024-04-21	0.00	0.04	0.15	0.50	0.11	0.10	0.32	0.32
2024-04-28	0.00	0.03	0.15	0.50	0.11	0.10	0.32	0.32
2024-05-05	0.00	0.01	0.15	0.50	0.11	0.10	0.32	0.32
2024-05-12	0.00	0.16	0.15	0.50	0.11	0.10	0.32	0.32

Earthquake latitude >37 forecast (0: <=37 1: >37)



Earthquake latitude Analysis from 2024-10-03 to 2024-12-26 - Table
7 days interval

date	raw_estimated_va	fpr	fnr	avg_days	threshold	Optimal_THR	Optimal_fPr	Optimal_fNr
2024-10-03	0.46	0.05	0.33	13.65	0.60	0.55	0.19	0.19
2024-10-10	0.51	0.05	0.33	13.65	0.60	0.55	0.19	0.19
2024-10-17	0.57	0.05	0.33	13.65	0.60	0.55	0.19	0.19
2024-10-24	0.54	0.05	0.33	13.65	0.60	0.55	0.19	0.19
2024-10-31	0.47	0.05	0.33	13.65	0.60	0.55	0.19	0.19
2024-11-07	0.39	0.05	0.33	13.65	0.60	0.55	0.19	0.19
2024-11-14	0.52	0.05	0.33	13.65	0.60	0.55	0.19	0.19
2024-11-21	0.5	0.05	0.33	13.65	0.60	0.55	0.19	0.19
2024-11-28	0.48	0.05	0.33	13.65	0.60	0.55	0.19	0.19
2024-12-05	0.37	0.05	0.33	13.65	0.60	0.55	0.19	0.19
2024-12-12	0.5	0.05	0.33	13.65	0.60	0.55	0.19	0.19
2024-12-19	0.51	0.05	0.33	13.65	0.60	0.55	0.19	0.19
2024-12-26	0.56	0.05	0.33	13.65	0.60	0.55	0.19	0.19

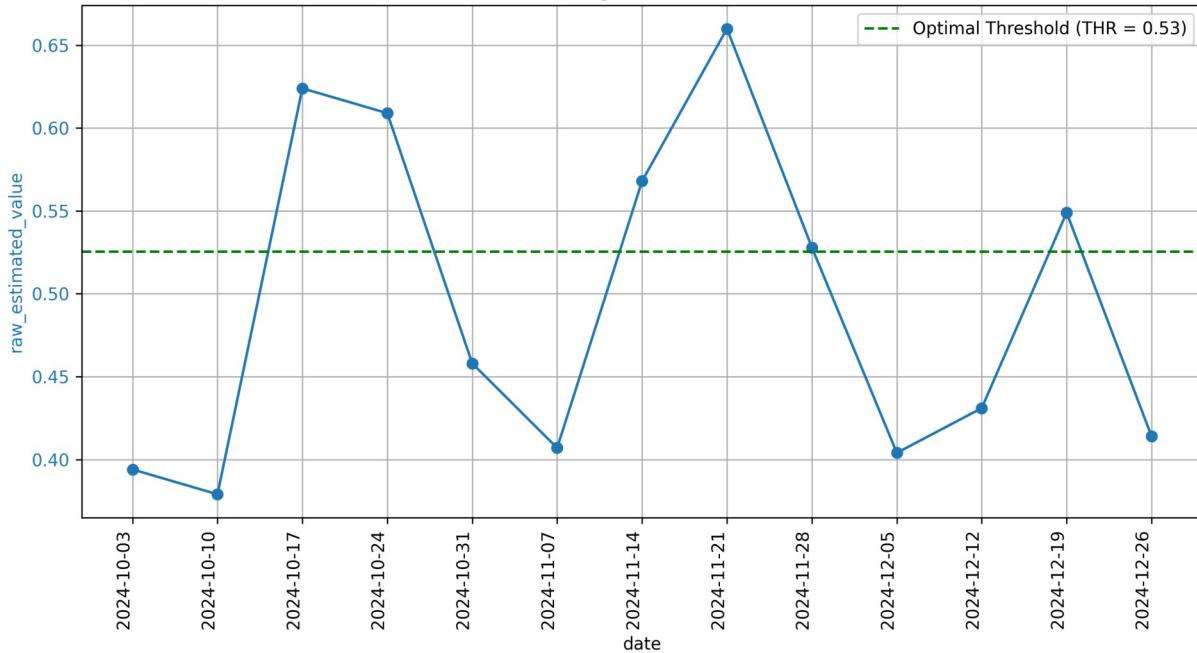


Earthquake latitude Analysis - Validation Time Table (Real vs Projected)
 from 2015-02-12 to 2023-12-28 - 84 days interval

date	real_value	raw_estimated_value	fpr	fnr	threshold	Optimal_THRESHOLD	Optimal_fPr	Optimal_fNr
2015-02-12	1.00	0.79	0.05	0.31	0.61	0.56	0.18	0.18
2015-05-07	1.00	0.70	0.05	0.31	0.61	0.56	0.18	0.18
2015-11-12	0.00	0.25	0.05	0.31	0.61	0.56	0.18	0.18
2016-01-07	1.00	0.58	0.05	0.31	0.61	0.56	0.18	0.18
2016-04-14	0.00	0.12	0.05	0.31	0.61	0.56	0.18	0.18
2016-11-17	1.00	0.64	0.05	0.31	0.61	0.56	0.18	0.18
2018-08-30	1.00	0.73	0.05	0.31	0.61	0.56	0.18	0.18
2021-02-11	1.00	0.82	0.05	0.31	0.61	0.56	0.18	0.18
2021-03-18	1.00	0.54	0.05	0.31	0.61	0.56	0.18	0.18
2021-04-29	1.00	0.71	0.05	0.31	0.61	0.56	0.18	0.18
2022-03-10	1.00	0.75	0.05	0.31	0.61	0.56	0.18	0.18
2023-12-28	1.00	0.67	0.05	0.31	0.61	0.56	0.18	0.18

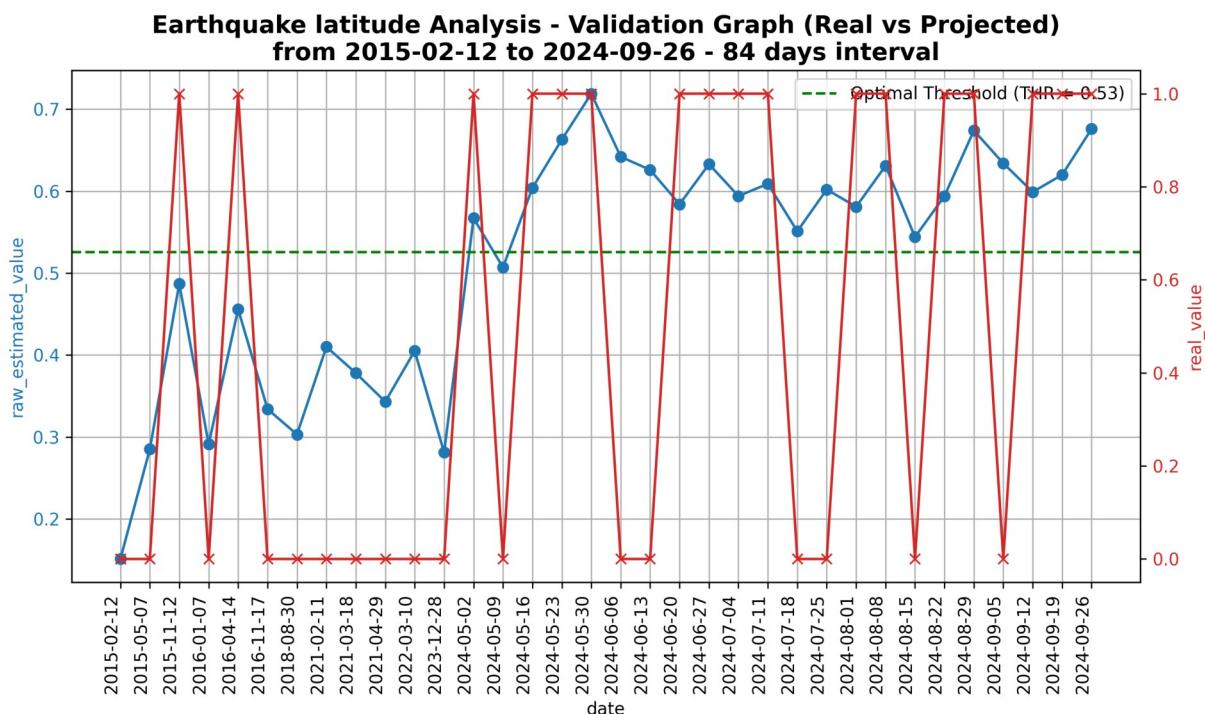
Earthquake latitude >37 forecast
(0: <=37 1: >37)
Alternative method (inverse forecast)

Earthquake latitude Analysis from 2024-10-03 to 2024-12-26 - Graph
7 days interval



Earthquake latitude Analysis from 2024-10-03 to 2024-12-26 - Table
7 days interval

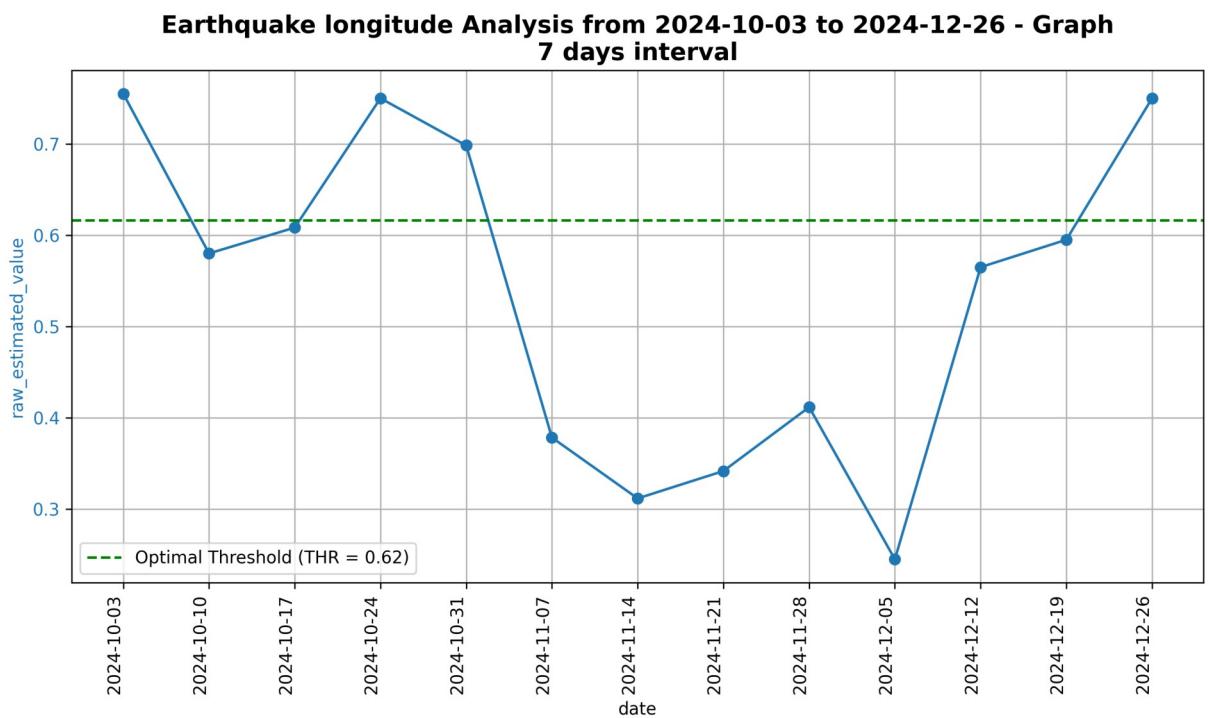
date	raw_estimated_va	fpr	fnr	avg_days	threshold	Optimal_THR	Optimal_fPr	Optimal_fNr
2024-10-03	0.39	0.39	0.35	20.30	0.52	0.53	0.37	0.37
2024-10-10	0.38	0.39	0.35	20.30	0.52	0.53	0.37	0.37
2024-10-17	0.62	0.39	0.35	20.30	0.52	0.53	0.37	0.37
2024-10-24	0.61	0.39	0.35	20.30	0.52	0.53	0.37	0.37
2024-10-31	0.46	0.39	0.35	20.30	0.52	0.53	0.37	0.37
2024-11-07	0.41	0.39	0.35	20.30	0.52	0.53	0.37	0.37
2024-11-14	0.57	0.39	0.35	20.30	0.52	0.53	0.37	0.37
2024-11-21	0.66	0.39	0.35	20.30	0.52	0.53	0.37	0.37
2024-11-28	0.53	0.39	0.35	20.30	0.52	0.53	0.37	0.37
2024-12-05	0.40	0.39	0.35	20.30	0.52	0.53	0.37	0.37
2024-12-12	0.43	0.39	0.35	20.30	0.52	0.53	0.37	0.37
2024-12-19	0.55	0.39	0.35	20.30	0.52	0.53	0.37	0.37
2024-12-26	0.41	0.39	0.35	20.30	0.52	0.53	0.37	0.37



Earthquake latitude Analysis - Validation Time Table (Real vs Projected)
from 2015-02-12 to 2024-09-26 - 84 days interval

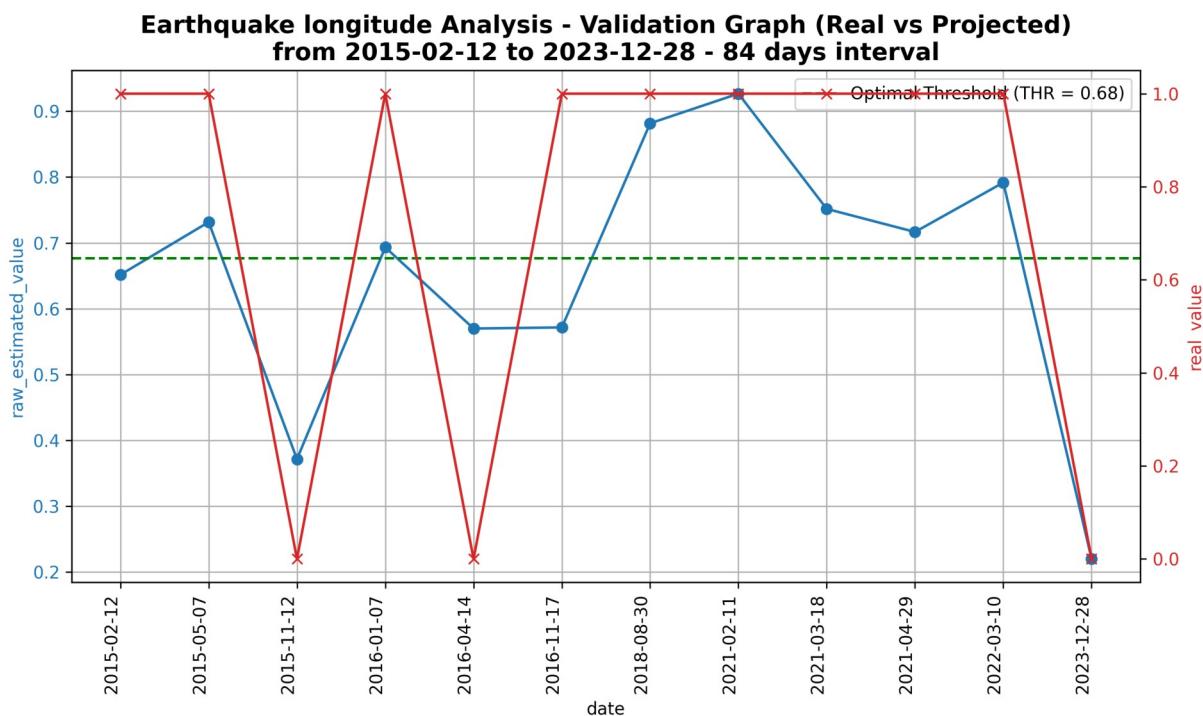
date	real_value	raw_estimated_value	fpr	fnr	threshold	Optimal_THRESHOLD	Optimal_fPr	Optimal_fNr
2015-02-12	0.00	0.15	0.39	0.35	0.52	0.53	0.37	0.37
2015-05-07	0.00	0.28	0.39	0.35	0.52	0.53	0.37	0.37
2015-11-12	1.00	0.49	0.39	0.35	0.52	0.53	0.37	0.37
2016-01-07	0.00	0.29	0.39	0.35	0.52	0.53	0.37	0.37
2016-04-14	1.00	0.46	0.39	0.35	0.52	0.53	0.37	0.37
2016-11-17	0.00	0.33	0.39	0.35	0.52	0.53	0.37	0.37
2018-08-30	0.00	0.3	0.39	0.35	0.52	0.53	0.37	0.37
2021-02-11	0.00	0.41	0.39	0.35	0.52	0.53	0.37	0.37
2021-03-18	0.00	0.38	0.39	0.35	0.52	0.53	0.37	0.37
2021-04-29	0.00	0.34	0.39	0.35	0.52	0.53	0.37	0.37
2022-03-10	0.00	0.4	0.39	0.35	0.52	0.53	0.37	0.37
2023-12-28	0.00	0.28	0.39	0.35	0.52	0.53	0.37	0.37
2024-05-02	1.00	0.57	0.39	0.35	0.52	0.53	0.37	0.37
2024-05-09	0.00	0.51	0.39	0.35	0.52	0.53	0.37	0.37
2024-05-16	1.00	0.6	0.39	0.35	0.52	0.53	0.37	0.37
2024-05-23	1.00	0.66	0.39	0.35	0.52	0.53	0.37	0.37
2024-05-30	1.00	0.72	0.39	0.35	0.52	0.53	0.37	0.37
2024-06-06	0.00	0.64	0.39	0.35	0.52	0.53	0.37	0.37
2024-06-13	0.00	0.63	0.39	0.35	0.52	0.53	0.37	0.37
2024-06-20	1.00	0.58	0.39	0.35	0.52	0.53	0.37	0.37

Earthquake longitude >138.3 forecast (0: <=138.3 1: >138.3)



Earthquake longitude Analysis from 2024-10-03 to 2024-12-26 - Table
7 days interval

date	raw_estimated_va	fpr	fnr	avg_days	threshold	Optimal_THR	Optimal_fPr	Optimal_fNr
2024-10-03	0.75	0.28	0.31	28.00	0.62	0.62	0.30	0.30
2024-10-10	0.58	0.28	0.31	28.00	0.62	0.62	0.30	0.30
2024-10-17	0.61	0.28	0.31	28.00	0.62	0.62	0.30	0.30
2024-10-24	0.75	0.28	0.31	28.00	0.62	0.62	0.30	0.30
2024-10-31	0.70	0.28	0.31	28.00	0.62	0.62	0.30	0.30
2024-11-07	0.38	0.28	0.31	28.00	0.62	0.62	0.30	0.30
2024-11-14	0.31	0.28	0.31	28.00	0.62	0.62	0.30	0.30
2024-11-21	0.34	0.28	0.31	28.00	0.62	0.62	0.30	0.30
2024-11-28	0.41	0.28	0.31	28.00	0.62	0.62	0.30	0.30
2024-12-05	0.24	0.28	0.31	28.00	0.62	0.62	0.30	0.30
2024-12-12	0.56	0.28	0.31	28.00	0.62	0.62	0.30	0.30
2024-12-19	0.59	0.28	0.31	28.00	0.62	0.62	0.30	0.30
2024-12-26	0.75	0.28	0.31	28.00	0.62	0.62	0.30	0.30

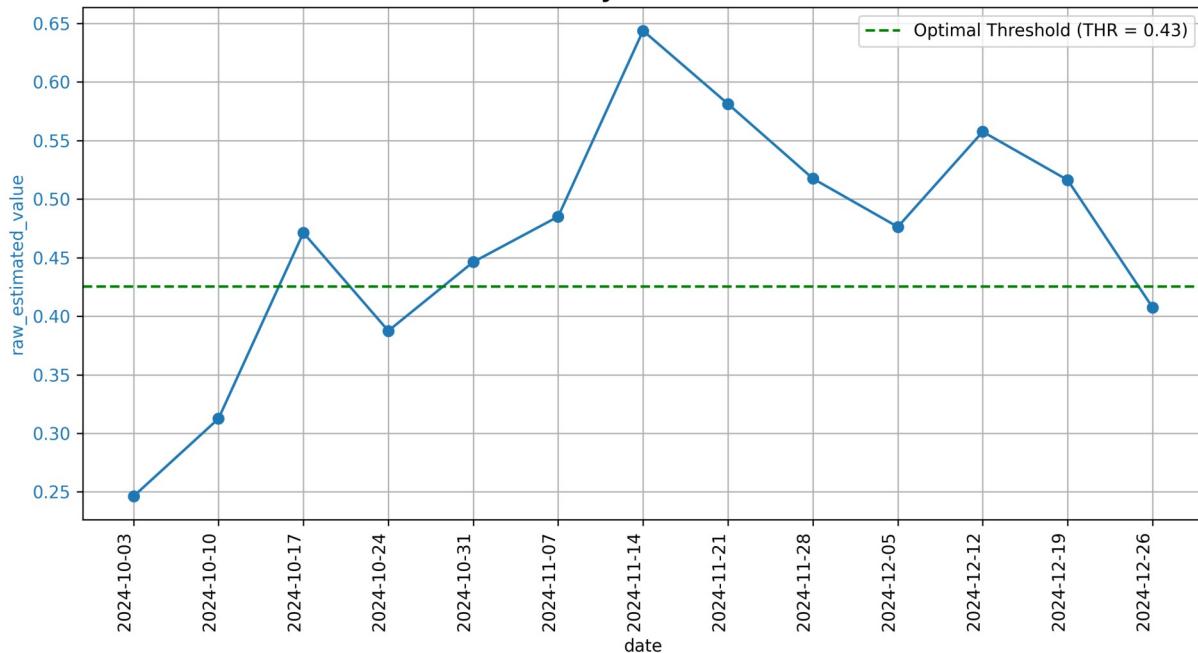


Earthquake longitude Analysis - Validation Time Table (Real vs Projected)
from 2015-02-12 to 2023-12-28 - 84 days interval

date	real_value	raw_estimated_value	fpr	fnr	threshold	Optimal_THRESHOLD	Optimal_fPr	Optimal_fNr
2015-02-12	1.00	0.65	0.22	0.22	0.66	0.68	0.22	0.22
2015-05-07	1.00	0.73	0.22	0.22	0.66	0.68	0.22	0.22
2015-11-12	0.00	0.37	0.22	0.22	0.66	0.68	0.22	0.22
2016-01-07	1.00	0.69	0.22	0.22	0.66	0.68	0.22	0.22
2016-04-14	0.00	0.57	0.22	0.22	0.66	0.68	0.22	0.22
2016-11-17	1.00	0.57	0.22	0.22	0.66	0.68	0.22	0.22
2018-08-30	1.00	0.88	0.22	0.22	0.66	0.68	0.22	0.22
2021-02-11	1.00	0.93	0.22	0.22	0.66	0.68	0.22	0.22
2021-03-18	1.00	0.75	0.22	0.22	0.66	0.68	0.22	0.22
2021-04-29	1.00	0.72	0.22	0.22	0.66	0.68	0.22	0.22
2022-03-10	1.00	0.79	0.22	0.22	0.66	0.68	0.22	0.22
2023-12-28	0.00	0.22	0.22	0.22	0.66	0.68	0.22	0.22

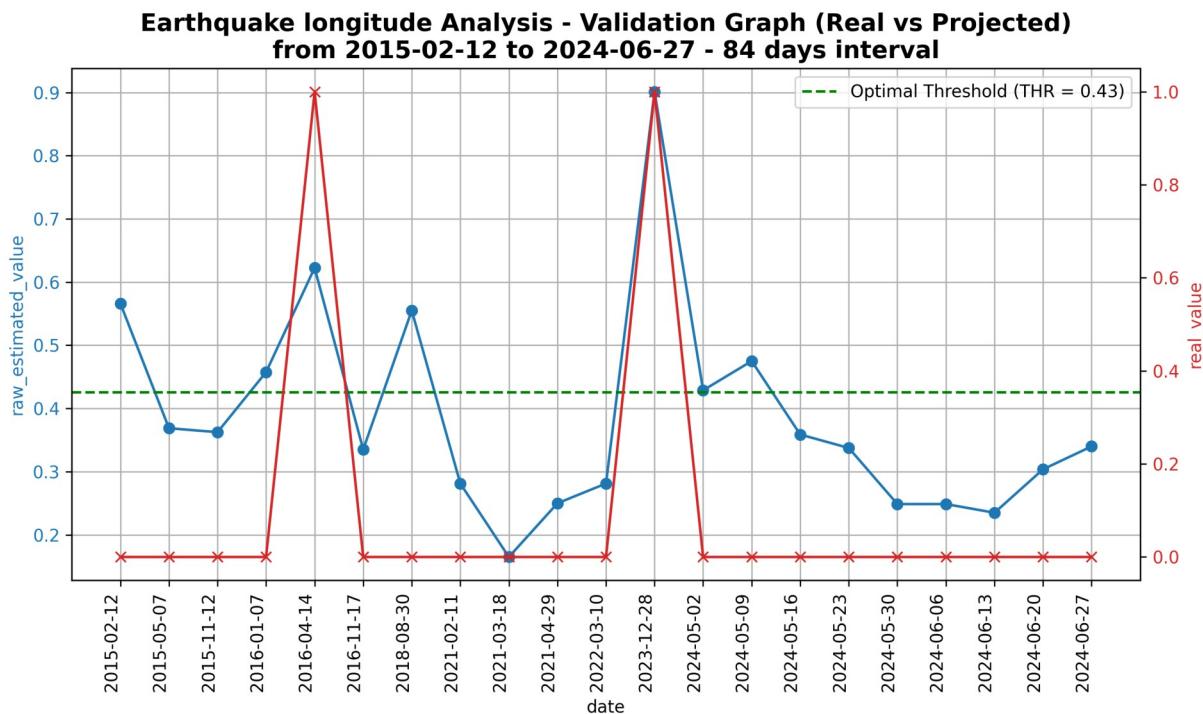
Earthquake longitude >138.3 forecast (0: <=138.3 1: >138.3) Alternative method (inverse forecast)

**Earthquake longitude Analysis from 2024-10-03 to 2024-12-26 - Graph
 7 days interval**



**Earthquake longitude Analysis from 2024-10-03 to 2024-12-26 - Table
 7 days interval**

date	raw_estimated_va	fpr	fnr	avg_days	threshold	Optimal_THR	Optimal_fPr	Optimal_fNr
2024-10-03	0.25	0.39	0.12	9.62	0.39	0.43	0.26	0.26
2024-10-10	0.31	0.39	0.12	9.62	0.39	0.43	0.26	0.26
2024-10-17	0.47	0.39	0.12	9.62	0.39	0.43	0.26	0.26
2024-10-24	0.39	0.39	0.12	9.62	0.39	0.43	0.26	0.26
2024-10-31	0.45	0.39	0.12	9.62	0.39	0.43	0.26	0.26
2024-11-07	0.48	0.39	0.12	9.62	0.39	0.43	0.26	0.26
2024-11-14	0.64	0.39	0.12	9.62	0.39	0.43	0.26	0.26
2024-11-21	0.58	0.39	0.12	9.62	0.39	0.43	0.26	0.26
2024-11-28	0.52	0.39	0.12	9.62	0.39	0.43	0.26	0.26
2024-12-05	0.48	0.39	0.12	9.62	0.39	0.43	0.26	0.26
2024-12-12	0.56	0.39	0.12	9.62	0.39	0.43	0.26	0.26
2024-12-19	0.52	0.39	0.12	9.62	0.39	0.43	0.26	0.26
2024-12-26	0.41	0.39	0.12	9.62	0.39	0.43	0.26	0.26



Earthquake longitude Analysis - Validation Time Table (Real vs Projected)
from 2015-02-12 to 2024-06-27 - 84 days interval

date	real_value	raw_estimated_value	fpr	fnr	threshold	Optimal_THRESHOLD	Optimal_fPr	Optimal_fNr
2015-02-12	0.00	0.57	0.39	0.12	0.39	0.43	0.26	0.26
2015-05-07	0.00	0.37	0.39	0.12	0.39	0.43	0.26	0.26
2015-11-12	0.00	0.36	0.39	0.12	0.39	0.43	0.26	0.26
2016-01-07	0.00	0.46	0.39	0.12	0.39	0.43	0.26	0.26
2016-04-14	1.00	0.62	0.39	0.12	0.39	0.43	0.26	0.26
2016-11-17	0.00	0.33	0.39	0.12	0.39	0.43	0.26	0.26
2018-08-30	0.00	0.55	0.39	0.12	0.39	0.43	0.26	0.26
2021-02-11	0.00	0.28	0.39	0.12	0.39	0.43	0.26	0.26
2021-03-18	0.00	0.16	0.39	0.12	0.39	0.43	0.26	0.26
2021-04-29	0.00	0.25	0.39	0.12	0.39	0.43	0.26	0.26
2022-03-10	0.00	0.28	0.39	0.12	0.39	0.43	0.26	0.26
2023-12-28	1.00	0.90	0.39	0.12	0.39	0.43	0.26	0.26
2024-05-02	0.00	0.43	0.39	0.12	0.39	0.43	0.26	0.26
2024-05-09	0.00	0.47	0.39	0.12	0.39	0.43	0.26	0.26
2024-05-16	0.00	0.36	0.39	0.12	0.39	0.43	0.26	0.26
2024-05-23	0.00	0.34	0.39	0.12	0.39	0.43	0.26	0.26
2024-05-30	0.00	0.25	0.39	0.12	0.39	0.43	0.26	0.26
2024-06-06	0.00	0.25	0.39	0.12	0.39	0.43	0.26	0.26
2024-06-13	0.00	0.23	0.39	0.12	0.39	0.43	0.26	0.26
2024-06-20	0.00	0.30	0.39	0.12	0.39	0.43	0.26	0.26