

Hometown Project

By Homework Team

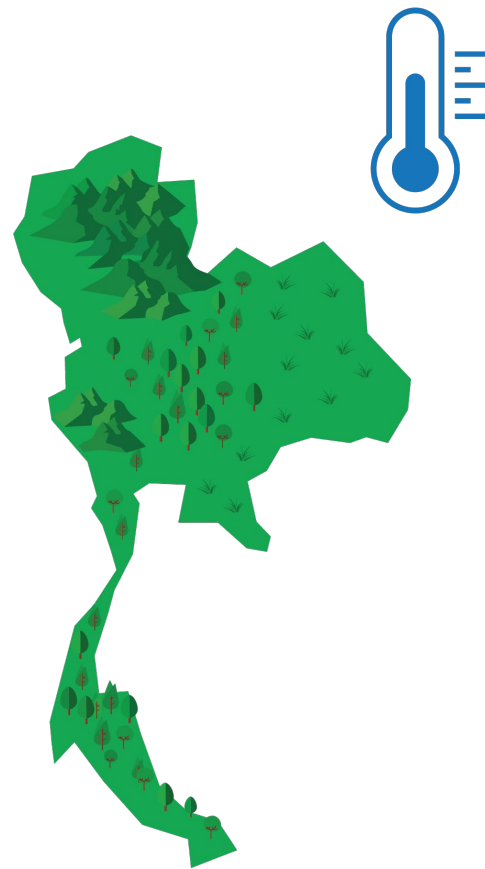


Overview



Motivation

Season predictor for everyone who want to know when the winter is coming!!!



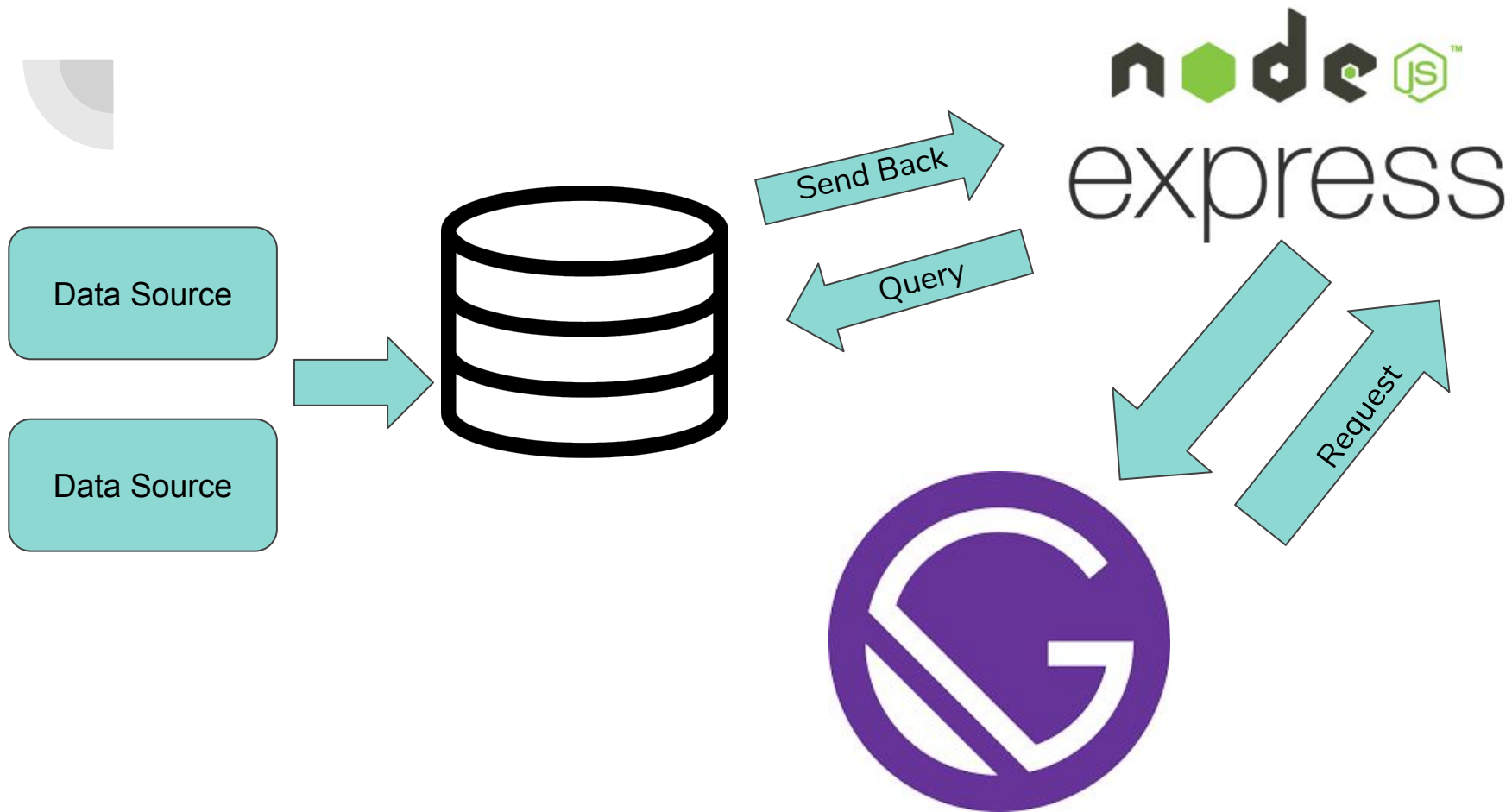


Pain Points

Because the meteorological Department's website usually predicts the whole of the country, but in fact, the seasons of each region do not come together. We therefore want to make an app to calculate the seasons in each region.

Overall architecture

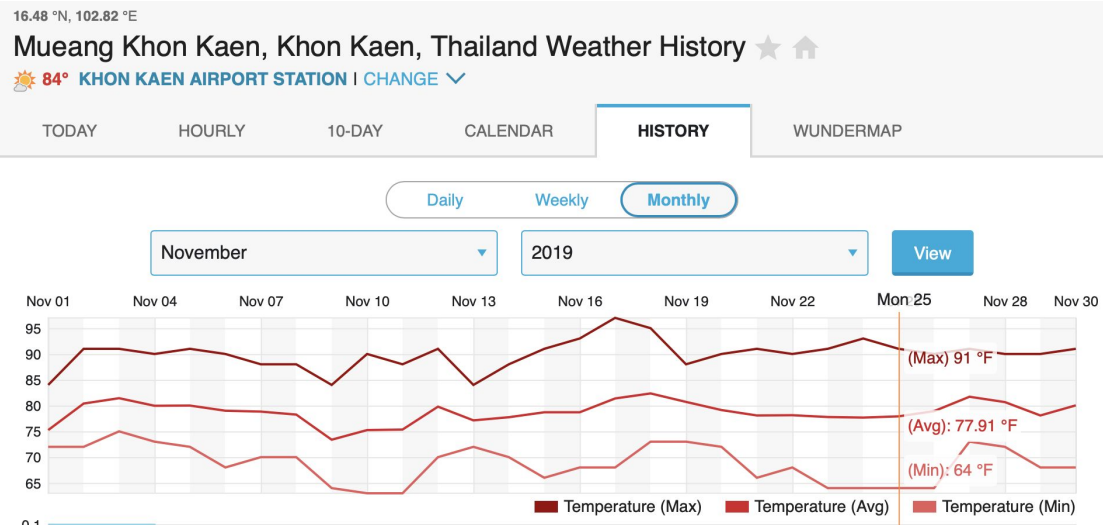




Data sources



WEATHER UNDERGROUND





timeanddate.com

November 1999 — Sun in Bangkok

[< October](#) [November](#) [December >](#)

Month: Year: [Go](#)

1999	Sunrise/Sunset		Daylength		Astronomical Twilight		Nautical Twilight		Civil Twilight		Solar Noon	
Nov	Sunrise	Sunset	Length	Difference	Start	End	Start	End	Start	End	Time	Mil. km
1 ▾	06:12 ↗ (104°)	17:50 ↖ (255°)	11:38:33	−0:39	04:59	19:03	05:25	18:38	05:50	18:12	12:01 (62.0°)	148.493
2 ▾	06:12 ↗ (105°)	17:50 ↖ (255°)	11:37:54	−0:39	05:00	19:03	05:25	18:37	05:50	18:12	12:01 (61.7°)	148.455
3 ▾	06:12 ↗ (105°)	17:50 ↖ (255°)	11:37:15	−0:38	05:00	19:02	05:25	18:37	05:50	18:12	12:01 (61.4°)	148.417
4 ▾	06:13 ↗ (105°)	17:49 ↖ (254°)	11:36:37	−0:38	05:00	19:02	05:25	18:37	05:51	18:11	12:01 (61.1°)	148.380
5 ▾	06:13 ↗ (106°)	17:49 ↖ (254°)	11:35:59	−0:37	05:00	19:02	05:26	18:37	05:51	18:11	12:01 (60.7°)	148.343
6 ▾	06:13 ↗ (106°)	17:49 ↖ (254°)	11:35:22	−0:37	05:00	19:02	05:26	18:36	05:51	18:11	12:01 (60.4°)	148.306
7 ▾	06:14 ↗ (106°)	17:48 ↖ (254°)	11:34:45	−0:36	05:01	19:02	05:26	18:36	05:52	18:11	12:01 (60.1°)	148.270
8 ▾	06:14 ↗ (107°)	17:48 ↖ (253°)	11:34:08	−0:36	05:01	19:01	05:26	18:36	05:52	18:10	12:01 (59.8°)	148.233
9 ▾	06:14 ↗ (107°)	17:48 ↖ (253°)	11:33:32	−0:36	05:01	19:01	05:27	18:36	05:52	18:10	12:01 (59.6°)	148.197
10 ▾	06:15 ↗ (107°)	17:48 ↖ (253°)	11:32:56	−0:35	05:02	19:01	05:27	18:36	05:53	18:10	12:01 (59.3°)	148.161
11 ▾	06:15 ↗ (108°)	17:48 ↖ (252°)	11:32:21	−0:35	05:02	19:01	05:27	18:36	05:53	18:10	12:01 (59.0°)	148.125
12 ▾	06:16 ↗ (108°)	17:47 ↖ (252°)	11:31:47	−0:34	05:02	19:01	05:28	18:35	05:53	18:10	12:02 (58.7°)	148.090
13 ▾	06:16 ↗ (108°)	17:47 ↖ (252°)	11:31:13	−0:33	05:02	19:01	05:28	18:35	05:54	18:10	12:02 (58.4°)	148.055
14 ▾	06:16 ↗ (108°)	17:47 ↖ (251°)	11:30:40	−0:33	05:03	19:01	05:28	18:35	05:54	18:09	12:02 (58.2°)	148.020
15 ▾	06:17 ↗ (109°)	17:47 ↖ (251°)	11:30:07	−0:32	05:03	19:01	05:29	18:35	05:55	18:09	12:02 (57.9°)	147.986

Collection mechanisms





Scheduled Collection

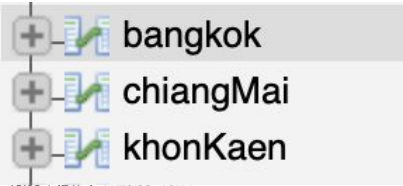
Get a new set of data daily, weekly, monthly, etc.



Select Mode																
Time	Temperature (° F)			Dew Point (° F)			Humidity (%)			Wind Speed (mph)			Pressure (Hg)			Prec
Nov	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Tot
1	84	75.3	72	73	68.1	63	100	79.7	61	12	6.6	2	29.2	29.2	29.1	0.0
2	91	80.4	72	73	72.3	70	100	78.1	49	9	4.7	2	29.2	29.1	29.1	0.0
3	91	81.4	75	73	72.5	72	94	75.6	55	9	4.5	0	29.2	29.2	29.1	0.0
4	90	80.0	73	72	68.6	66	94	69.8	49	12	6.1	2	29.3	29.2	29.1	0.0
5	91	80.0	72	70	66.4	64	94	66.0	41	8	4.0	1	29.2	29.1	29.1	0.0
6	90	79.0	68	68	66.7	66	94	68.5	46	6	2.8	0	29.2	29.1	29.0	0.0
7	88	78.8	70	68	67.8	66	88	70.5	52	8	3.6	0	29.2	29.2	29.1	0.0
8	88	78.3	70	66	64.0	61	88	63.7	43	10	6.3	2	29.3	29.3	29.2	0.0
9	84	73.4	64	64	62.6	61	100	70.8	45	7	3.3	0	29.3	29.3	29.2	0.0

Database

year	month	date	tempMax	tempAvg	tempMin	tempMonthAvg	tempDiff	sunrise
2017	January	1	86.00	80.10	73.00	73.00	0.00	06:41 ↑ (113°)
2017	January	2	90.00	81.30	73.00	73.00	0.00	06:41 ↑ (113°)
2017	January	3	86.00	81.20	77.00	74.33	2.67	06:42 ↑ (113°)
2017	January	4	86.00	81.20	75.00	74.50	0.50	06:42 ↑ (113°)
2017	January	5	88.00	82.60	79.00	75.40	3.60	06:42 ↑ (113°)
2017	January	6	86.00	79.70	75.00	75.33	-0.33	06:43 ↑ (113°)
2017	January	7	90.00	82.20	77.00	75.57	1.43	06:43 ↑ (113°)
2017	January	8	82.00	79.90	75.00	75.50	-0.50	06:43 ↑ (113°)
2017	January	9	82.00	78.30	75.00	75.44	-0.44	06:44 ↑ (113°)
2017	January	10	81.00	78.40	75.00	75.40	-0.40	06:44 ↑ (112°)
2017	January	11	88.00	80.30	75.00	75.36	-0.36	06:44 ↑ (112°)
2017	January	12	90.00	81.50	75.00	75.33	-0.33	06:44 ↑ (112°)
2017	January	13	90.00	82.90	77.00	75.46	1.54	06:44 ↑ (112°)
2017	January	14	91.00	83.50	73.00	75.29	-2.29	06:45 ↑ (112°)
2017	January	15	93.00	85.30	77.00	75.40	1.60	06:45 ↑ (112°)
2017	January	16	91.00	84.20	75.00	75.38	-0.38	06:45 ↑ (111°)
2017	January	17	88.00	82.80	79.00	75.59	3.41	06:45 ↑ (111°)
2017	January	18	90.00	84.30	79.00	75.78	3.22	06:45 ↑ (111°)



Data sharing API



- url/{province}/{year}/{month}
- url/{province}/{year}/{month}/sun
- url/{province}/{season}/{year}

Data visualization





Gatsby



HIGHCHARTS[®]

Demonstration