

WEATHER FORECAST

SON YELENA



BEFORE

The screenshot shows a weather forecast for Seoul from May 19 to May 23. Each day's forecast includes an icon, weather condition, temperature, humidity, and wind speed.

Date	Condition	Temperature (°C)	Humidity (%)	Wind Speed (km/h)
May 19, Monday	broken clouds	20°C	56%	6.91 km/h
May 20, Tuesday	scattered clouds	26°C	54%	5.06 km/h
May 21, Wednesday	broken clouds	27°C	57%	3.16 km/h
May 22, Thursday	light rain	25°C	59%	2.78 km/h
May 23, Friday	overcast clouds	21°C	44%	2.97 km/h

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NOW

The screenshot shows a weather forecast for Seoul from June 5 to June 11. The interface has been updated with a more modern design, including a map of South Korea and detailed daily forecasts.

Today (Jun 5): scattered clouds, 26°C, 26%, 5.15 km/h. Sunrise: 5:11:28 AM, Sunset: 7:49:55 PM, UV Index: 8.11. Next Hours: 12:00 AM: 16°C, 01:00 AM: 16°C, 02:00 AM: 16°C, 03:00 AM: 16°C, 04:00 AM: 16°C, 05:00 AM: 16°C. Air Quality: Moderate.

Tomorrow (Jun 6): broken clouds, 28°C, 25%, 7.17 km/h. Sunrise: 5:11:14 AM, Sunset: 7:50:30 PM, UV Index: 8.17. Next Hours: 12:00 AM: 20°C, 01:00 AM: 20°C, 02:00 AM: 19°C, 03:00 AM: 19°C, 04:00 AM: 18°C, 05:00 AM: 18°C. Air Quality: Moderate.

Other Cities: Busan, Incheon, Daejeon, Daegu, Gwangju, Other.

Map: A satellite map of South Korea showing cloud cover and terrain. Leaflet | NASA GIBS / Blue Marble, NASA GIBS / MODIS Terra

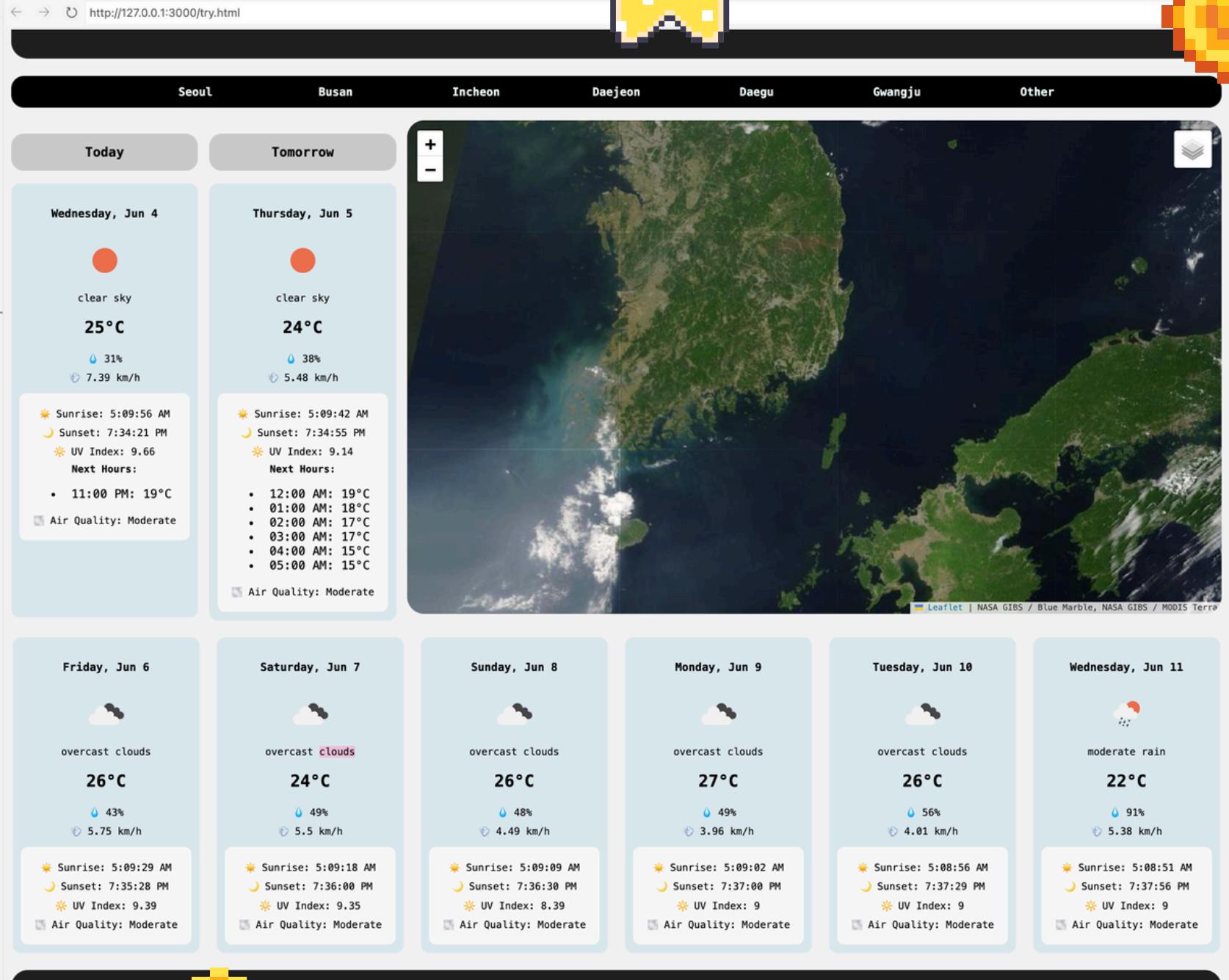
Date	Condition	Temperature (°C)	Humidity (%)	Wind Speed (km/h)
Friday, Jun 6	overcast clouds	26°C	43%	5.75 km/h
Saturday, Jun 7	overcast clouds	24°C	49%	5.5 km/h
Sunday, Jun 8	overcast clouds	26°C	48%	4.49 km/h
Monday, Jun 9	overcast clouds	27°C	49%	3.96 km/h
Tuesday, Jun 10	overcast clouds	26°C	56%	4.01 km/h
Wednesday, Jun 11	moderate rain	22°C	91%	5.38 km/h

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USER INTERFACE OVERVIEW

- Intuitive layout with Today, Tomorrow, and Map sections side-by-side
- Weather cards with detailed hourly forecasts for the first two days

```
try.html
1 <html lang="en">
2   <head>
3     <meta charset="UTF-8" />
4     <link rel="stylesheet" href="./style01.css" />
5     <!-- Leaflet CSS -->
6     <link rel="stylesheet" href="https://unpkg.co/
7       <!-- Leaflet JS -->
8       <script src="https://unpkg.com/leaflet@1.9.4/
9         </head>
10        <body>
11          <div class="container">
12            <h1>Weather in Korea 🌎</h1>
13            <p>Check the latest weather in major Kore
14          </div>
15
16          <nav class="nav">
17            <ul class="city-buttons">
18              <li><button data-city="Seoul" data-lat=
19                <li><button data-city="Busan" data-lat=
20                <li><button data-city="Incheon" data-la
21                <li><button data-city="Daejeon" data-la
22                <li><button data-city="Daegu" data-lat=
23                <li><button data-city="Gwangju" data-la
24                <li><button data-city="Other" data-lat=
25            </ul>
26          </nav>
27
28          <br>
29          <div class="top-row" style="display: flex; al
30
31            <div><h3 style="flex: 0 0 15%; background
32            <div id="today"></div></div>
33
34            <div><h3 style="flex: 0 0 15%; background
35            <div id="tomorrow"></div></div>
36
37            <div id="map" style="flex: 1; background-
38              </div>
39
40            <div id="forecast" class="forecast-container"
41
42              <h3>Today's Forecast</h3>
43              <table border="1">
44                <thead>
45                  <tr>
46                    <th>Time</th>
47                    <th>Condition</th>
48                    <th>Temperature (°C)</th>
49                    <th>Humidity (%)</th>
50                    <th>Wind Speed (km/h)</th>
51                </thead>
52                <tbody>
53                  <tr>
54                    <td>11:00 PM</td>
55                    <td>Clear Sky</td>
56                    <td>19°C</td>
57                    <td>31%</td>
58                    <td>7.39 km/h</td>
59
60                  <td>12:00 AM</td>
61                  <td>Clear Sky</td>
62                  <td>19°C</td>
63                  <td>31%</td>
64                  <td>7.39 km/h</td>
65
66                  <td>01:00 AM</td>
67                  <td>Clear Sky</td>
68                  <td>18°C</td>
69                  <td>31%</td>
70                  <td>7.39 km/h</td>
71
72                  <td>02:00 AM</td>
73                  <td>Clear Sky</td>
74                  <td>17°C</td>
75                  <td>31%</td>
76                  <td>7.39 km/h</td>
77
78                  <td>03:00 AM</td>
79                  <td>Clear Sky</td>
80                  <td>17°C</td>
81                  <td>31%</td>
82                  <td>7.39 km/h</td>
83
84                  <td>04:00 AM</td>
85                  <td>Clear Sky</td>
86                  <td>15°C</td>
87                  <td>31%</td>
88                  <td>7.39 km/h</td>
89
90                  <td>05:00 AM</td>
91                  <td>Clear Sky</td>
92                  <td>15°C</td>
93                  <td>31%</td>
94                  <td>7.39 km/h</td>
95
96                </tbody>
97              </table>
98
99            <h3>Tomorrow's Forecast</h3>
100            <table border="1">
101              <thead>
102                <tr>
103                  <th>Time</th>
104                  <th>Condition</th>
105                  <th>Temperature (°C)</th>
106                  <th>Humidity (%)</th>
107                  <th>Wind Speed (km/h)</th>
108                </thead>
109                <tbody>
110                  <tr>
111                    <td>11:00 PM</td>
112                    <td>Clear Sky</td>
113                    <td>24°C</td>
114                    <td>38%</td>
115                    <td>5.48 km/h</td>
116
117                  <td>12:00 AM</td>
118                  <td>Clear Sky</td>
119                  <td>24°C</td>
120                  <td>38%</td>
121                  <td>5.48 km/h</td>
122
123                  <td>01:00 AM</td>
124                  <td>Clear Sky</td>
125                  <td>23°C</td>
126                  <td>38%</td>
127                  <td>5.48 km/h</td>
128
129                  <td>02:00 AM</td>
130                  <td>Clear Sky</td>
131                  <td>22°C</td>
132                  <td>38%</td>
133                  <td>5.48 km/h</td>
134
135                  <td>03:00 AM</td>
136                  <td>Clear Sky</td>
137                  <td>21°C</td>
138                  <td>38%</td>
139                  <td>5.48 km/h</td>
140
141                  <td>04:00 AM</td>
142                  <td>Clear Sky</td>
143                  <td>20°C</td>
144                  <td>38%</td>
145                  <td>5.48 km/h</td>
146
147                  <td>05:00 AM</td>
148                  <td>Clear Sky</td>
149                  <td>19°C</td>
150                  <td>38%</td>
151                  <td>5.48 km/h</td>
152
153                </tbody>
154              </table>
155
156            <h3>Map Overview</h3>
157            <div><img alt="Map of South Korea showing weather conditions" /></div>
158
159            <h3>Detailed Forecast for the First Two Days</h3>
160            <table border="1">
161              <thead>
162                <tr>
163                  <th>Day</th>
164                  <th>Condition</th>
165                  <th>Temperature (°C)</th>
166                  <th>Humidity (%)</th>
167                  <th>Wind Speed (km/h)</th>
168                </thead>
169                <tbody>
170                  <tr>
171                    <td>Wednesday, Jun 4</td>
172                    <td>Clear Sky</td>
173                    <td>25°C</td>
174                    <td>31%</td>
175                    <td>7.39 km/h</td>
176
177                  <td>Thursday, Jun 5</td>
178                  <td>Clear Sky</td>
179                  <td>24°C</td>
180                  <td>38%</td>
181                  <td>5.48 km/h</td>
182
183                  <td>Friday, Jun 6</td>
184                  <td>Overcast Clouds</td>
185                  <td>26°C</td>
186                  <td>43%</td>
187                  <td>5.75 km/h</td>
188
189                  <td>Saturday, Jun 7</td>
190                  <td>Overcast Clouds</td>
191                  <td>24°C</td>
192                  <td>49%</td>
193                  <td>5.5 km/h</td>
194
195                  <td>Sunday, Jun 8</td>
196                  <td>Overcast Clouds</td>
197                  <td>26°C</td>
198                  <td>48%</td>
199                  <td>4.49 km/h</td>
200
201                  <td>Monday, Jun 9</td>
202                  <td>Overcast Clouds</td>
203                  <td>27°C</td>
204                  <td>49%</td>
205                  <td>3.96 km/h</td>
206
207                  <td>Tuesday, Jun 10</td>
208                  <td>Overcast Clouds</td>
209                  <td>26°C</td>
210                  <td>56%</td>
211                  <td>4.01 km/h</td>
212
213                  <td>Wednesday, Jun 11</td>
214                  <td>Moderate Rain</td>
215                  <td>22°C</td>
216                  <td>91%</td>
217                  <td>5.38 km/h</td>
218
219                </tbody>
220              </table>
221
222            <h3>Sunrise and Sunset Times</h3>
223            <table border="1">
224              <thead>
225                <tr>
226                  <th>Day</th>
227                  <th>Sunrise Time</th>
228                  <th>Sunset Time</th>
229                </thead>
230                <tbody>
231                  <tr>
232                    <td>Wednesday, Jun 4</td>
233                    <td>5:09:56 AM</td>
234                    <td>7:34:21 PM</td>
235
236                  <td>Thursday, Jun 5</td>
237                  <td>5:09:42 AM</td>
238                  <td>7:34:55 PM</td>
239
240                  <td>Friday, Jun 6</td>
241                  <td>5:09:29 AM</td>
242                  <td>7:35:28 PM</td>
243
244                  <td>Saturday, Jun 7</td>
245                  <td>5:09:18 AM</td>
246                  <td>7:36:00 PM</td>
247
248                  <td>Sunday, Jun 8</td>
249                  <td>5:09:09 AM</td>
250                  <td>7:36:30 PM</td>
251
252                  <td>Monday, Jun 9</td>
253                  <td>5:09:02 AM</td>
254                  <td>7:37:00 PM</td>
255
256                  <td>Tuesday, Jun 10</td>
257                  <td>5:08:56 AM</td>
258                  <td>7:37:29 PM</td>
259
260                  <td>Wednesday, Jun 11</td>
261                  <td>5:08:51 AM</td>
262                  <td>7:37:56 PM</td>
263
264                </tbody>
265              </table>
266
267            <h3>UV Index and Air Quality</h3>
268            <table border="1">
269              <thead>
270                <tr>
271                  <th>Day</th>
272                  <th>UV Index</th>
273                  <th>Air Quality</th>
274                </thead>
275                <tbody>
276                  <tr>
277                    <td>Wednesday, Jun 4</td>
278                    <td>9.66</td>
279                    <td>Moderate</td>
280
281                  <td>Thursday, Jun 5</td>
282                  <td>9.14</td>
283                  <td>Moderate</td>
284
285                  <td>Friday, Jun 6</td>
286                  <td>9.39</td>
287                  <td>Moderate</td>
288
289                  <td>Saturday, Jun 7</td>
290                  <td>9.35</td>
291                  <td>Moderate</td>
292
293                  <td>Sunday, Jun 8</td>
294                  <td>8.39</td>
295                  <td>Moderate</td>
296
297                  <td>Monday, Jun 9</td>
298                  <td>9</td>
299                  <td>Moderate</td>
300
301                  <td>Tuesday, Jun 10</td>
302                  <td>9</td>
303                  <td>Moderate</td>
304
305                  <td>Wednesday, Jun 11</td>
306                  <td>9</td>
307                  <td>Moderate</td>
308
309                </tbody>
310              </table>
311
312            <h3>Footer Information</h3>
313            <div>
314              <p>© 2025 Weather in Korea. All rights reserved.</p>
315              <p>Weather data from <a href="https://openweathermap.org">OpenWeatherMap</a> API</p>
316            </div>
```

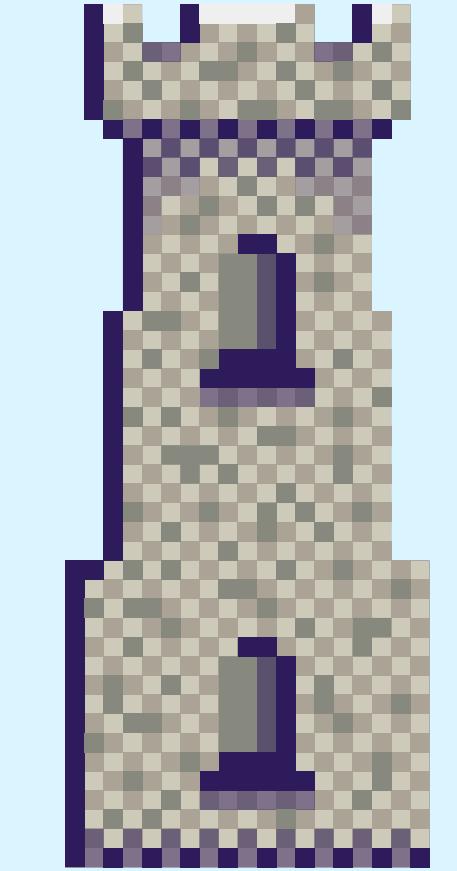


HTML

```
try.html > html > body > div.top-row
1  <!DOCTYPE html>
2  <html lang="en">
3  <head>
4    <title>Weather in Korea 🌎</title>
5    <meta charset="UTF-8" />
6    <link rel="stylesheet" href="./style01.css" />
7    <!-- Leaflet CSS -->
8    <link rel="stylesheet" href="https://unpkg.com/leaflet@1.9.4/dist/leaflet.css" />
9    <!-- Leaflet JS -->
10   <script src="https://unpkg.com/leaflet@1.9.4/dist/leaflet.js"></script>
11
12 </head>
13
14 <body>
15   <div class="container">
16     <h1>Weather in Korea 🌎</h1>
17     <p>Check the latest weather in major Korean cities ☀</p>
18   </div>
19
20   <nav class="nav">
21     <ul class="city-buttons">
22       <li><button data-city="Seoul" data-lat="37.5665" data-lon="126.9780">Seoul</button></li>
23       <li><button data-city="Busan" data-lat="35.1796" data-lon="129.0756">Busan</button></li>
24       <li><button data-city="Incheon" data-lat="37.4563" data-lon="126.7052">Incheon</button></li>
25       <li><button data-city="Daejeon" data-lat="36.3504" data-lon="127.3845">Daejeon</button></li>
26       <li><button data-city="Daegu" data-lat="35.8714" data-lon="128.6014">Daegu</button></li>
27       <li><button data-city="Gwangju" data-lat="35.1595" data-lon="126.8526">Gwangju</button></li>
28       <li><button data-city="Other" data-lat="0" data-lon="0">Other</button></li>
29     </ul>
30   </nav>
31   <br>
32   <div class="top-row" style="display: flex; align-items: center; justify-content: space-between; width: 100%; height: 50px; margin-bottom: 10px">
33     <div><h3 style="flex: 0 0 15%; background-color: #ccc; border-radius: 15px; padding: 1rem;">Today</h3>
34     <div id="today"></div></div>
35
36     <div><h3 style="flex: 0 0 15%; background-color: #ccc; border-radius: 15px; padding: 1rem;">Tomorrow</h3>
37     <div id="tomorrow"></div></div>
38
39     <div id="map" style="flex: 1; background-color: #lightblue; border-radius: 20px; height: 50px;"></div>
40
41   </div>
42
43 </div>
```

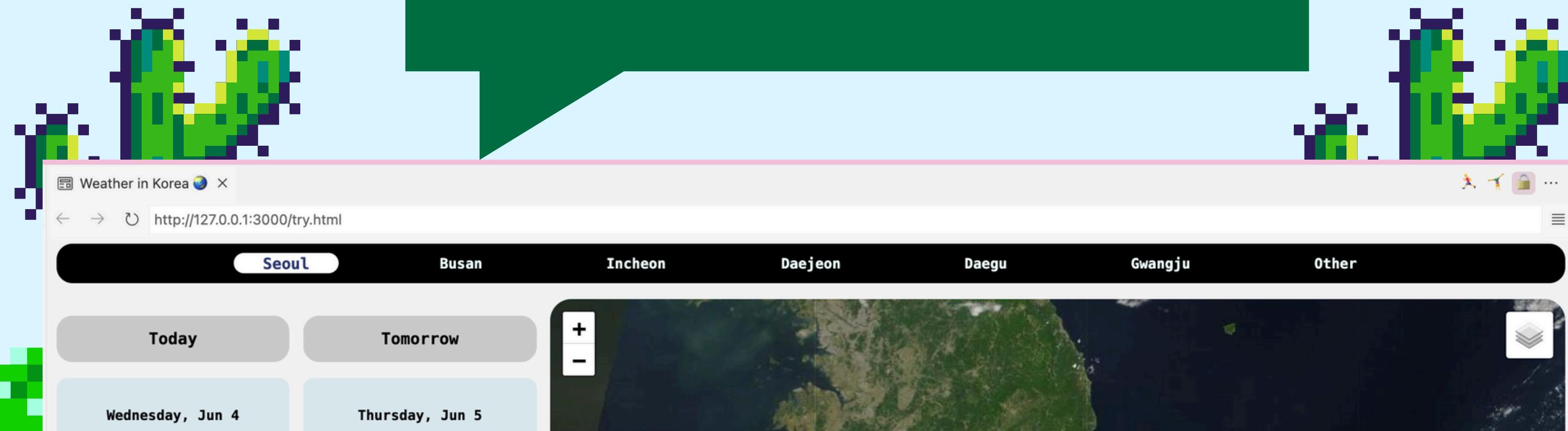


```
44
45   <div id="forecast" class="forecast-container"></div>
46
47 <footer class="site-footer">
48   <p>© 2025 Weather in Korea. All rights reserved.</p>
49   <p>Weather data from <a href="https://openweathermap.org/api" target="_blank">OpenWeatherMap</a></p>
50   <p>
51     <a href="/about">About</a> | 
52     <a href="/contact">Contact</a> | 
53     <a href="/terms">Terms of Service</a> | 
54     <a href="/privacy">Privacy Policy</a>
55   </p>
56   <p>
57     <a href="https://github.com" target="_blank">GitHub</a>
58   </p>
59 </footer>
60
61 <script src=".//weather12.js"></script>
62
63 </body>
```

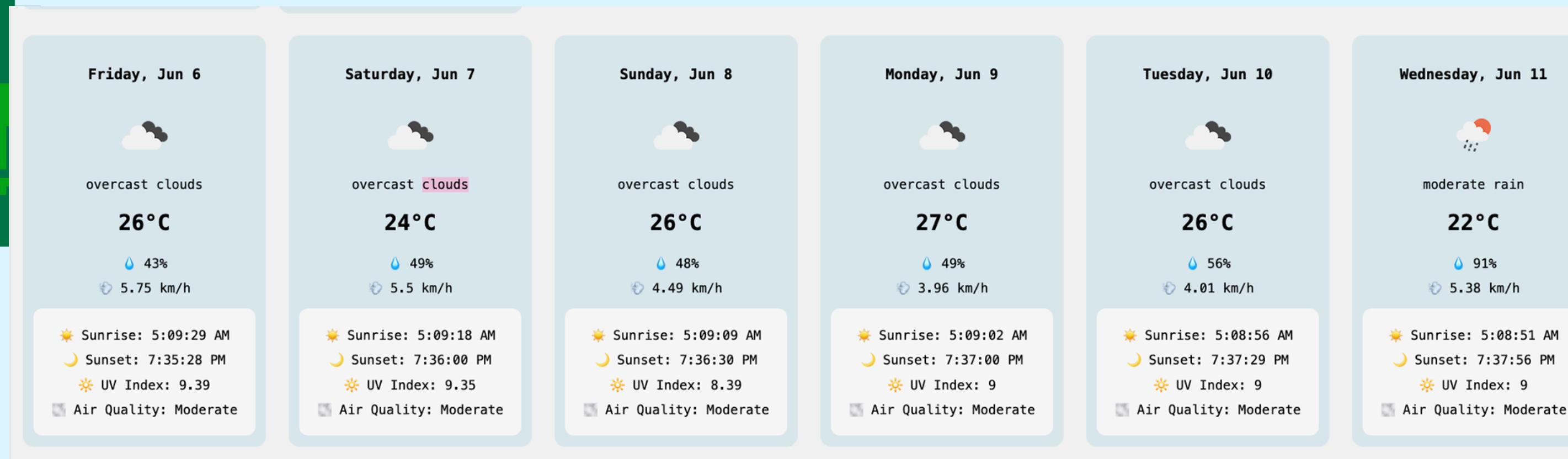
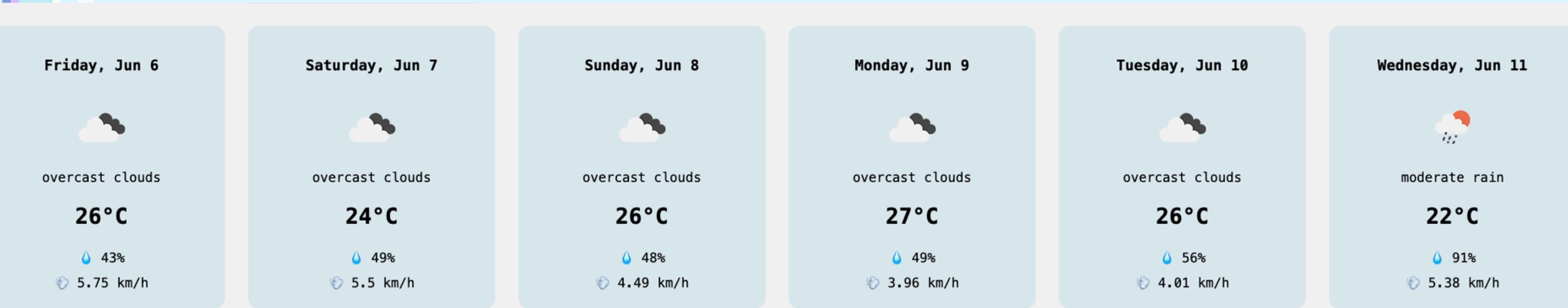


REAL-TIME WEATHER AND SATELLITE IMAGERY TAILORED FOR YOUR CITY

- detailed weather forecasts for today and tomorrow
- NASA's satellite imagery with interactive map layers
- seamless switching between cities with a single click



WEATHER DETAILS



CSE

```
! style01.css > ...
80 .buttons button.active {
81   background-color: #ffffff;
82   color: #2c396e;
83   transform: scale(1.1);
84 }
85 /* Forecast layout */
86 .forecast-container {
87   display: flex;
88   flex-wrap: wrap;
89   justify-content: center;
90   gap: 20px;
91   margin: 20px auto;
92   max-width: auto;
93   transition: opacity 0.5s ease-in-out;
94 }
95 .forecast-container.fade-out {
96   opacity: 0;
97   height: 580px
98 }
99
100 .forecast-card {
101   background-color: #rgb(219, 234, 239);
102   border-radius: 10px;
103   padding: 10px;
104   text-align: center;
105   width: 220px;
106   height: 580px
107   box-shadow: 10px 20px 50px rgba(196, 54, 54, 0.1);
108 }
109 #today .forecast-card {
110   height: 510px; /* fixed height */
111 }
112 .parameters {
113   text-align: left;
114 }
115 .forecast-card img {
116   width: 60px;
117   height: 60px;
118 }
119 .forecast-card p {
120   margin: 5px 0;
121   font-size: 0.9rem;
122 }
123
124
125
126
127
```

```
daily.forEach((day, index) => {
  const date = new Date(day.dt * 1000);
  const formattedDate = date.toLocaleDateString('en-US', { month: 'short', day: 'numeric', weekday: 'long' });
  const sunrise = new Date(day.sunrise * 1000).toLocaleTimeString();
  const sunset = new Date(day.sunset * 1000).toLocaleTimeString();
  const uvIndex = day.uvi ?? 'N/A';

  // Only generate hourly list for first two days
  let hourlyList = '';
  if (index === 0 || index === 1) {
    hourlyList = (data.hourly ?? [])
      .filter(h => new Date(h.dt * 1000).getDate() === date.getDate())
      .slice(0, 6)
      .map(hour => {
        const time = new Date(hour.dt * 1000).toLocaleTimeString([], { hour: '2-digit', minute: '2-digit' });
        return `<li>${time}: ${Math.round(hour.temp)}°C</li>`;
      })
      .join('');
  }

  const card = document.createElement('div');
  card.className = 'forecast-card';
  card.innerHTML = `
    <h4><strong>${formattedDate}</strong></h4>
    
    <p>${day.weather[0].description}</p>
    <h2>${Math.round(day.temp.day)}°C</h2>
    <p>💧 ${day.humidity}%</p>
    <p>💨 ${day.wind_speed} km/h</p>
    <div class="details">
      <p>☀️ Sunrise: ${sunrise}</p>
      <p>🌙 Sunset: ${sunset}</p>
      <p>☀️ UV Index: ${uvIndex}</p>
    ${hourlyList ? `<p><strong>Next Hours:</strong></p><ul>${hourlyList}</ul>` : ''}
    <p class="air-quality">⚠️ Loading air quality...</p>
    </div>
  `;
};
```

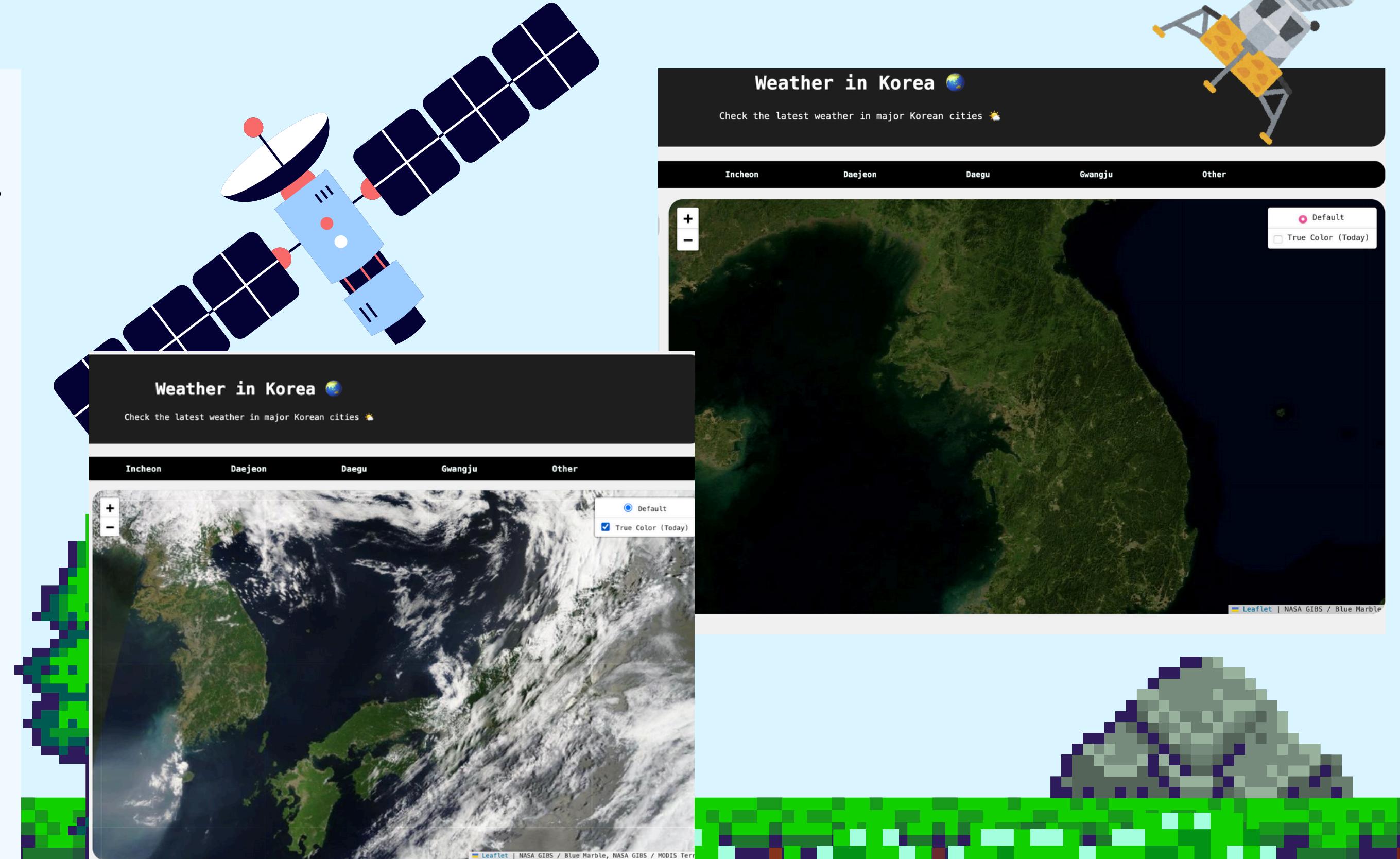
START



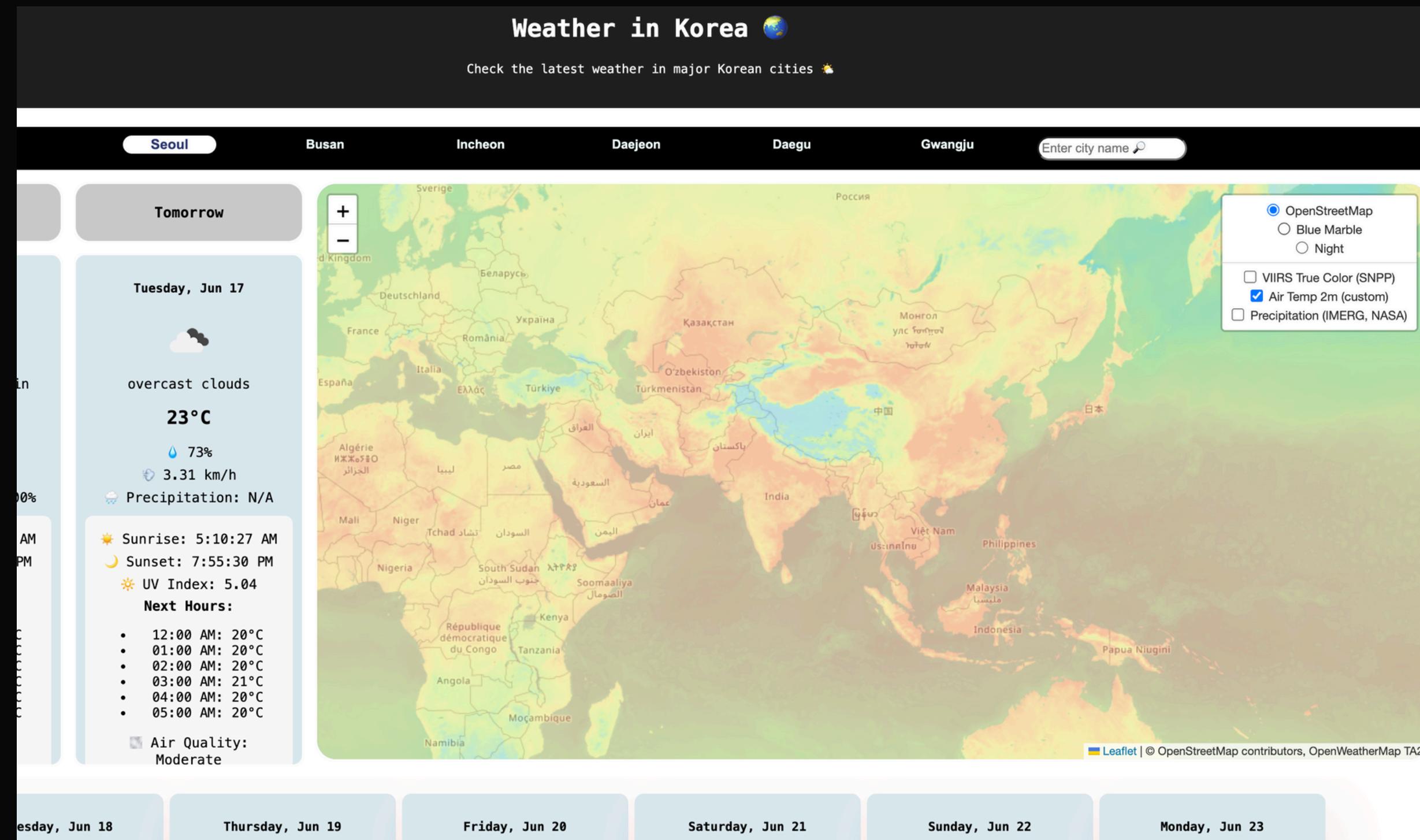
JS

INTERACTIVE MAP

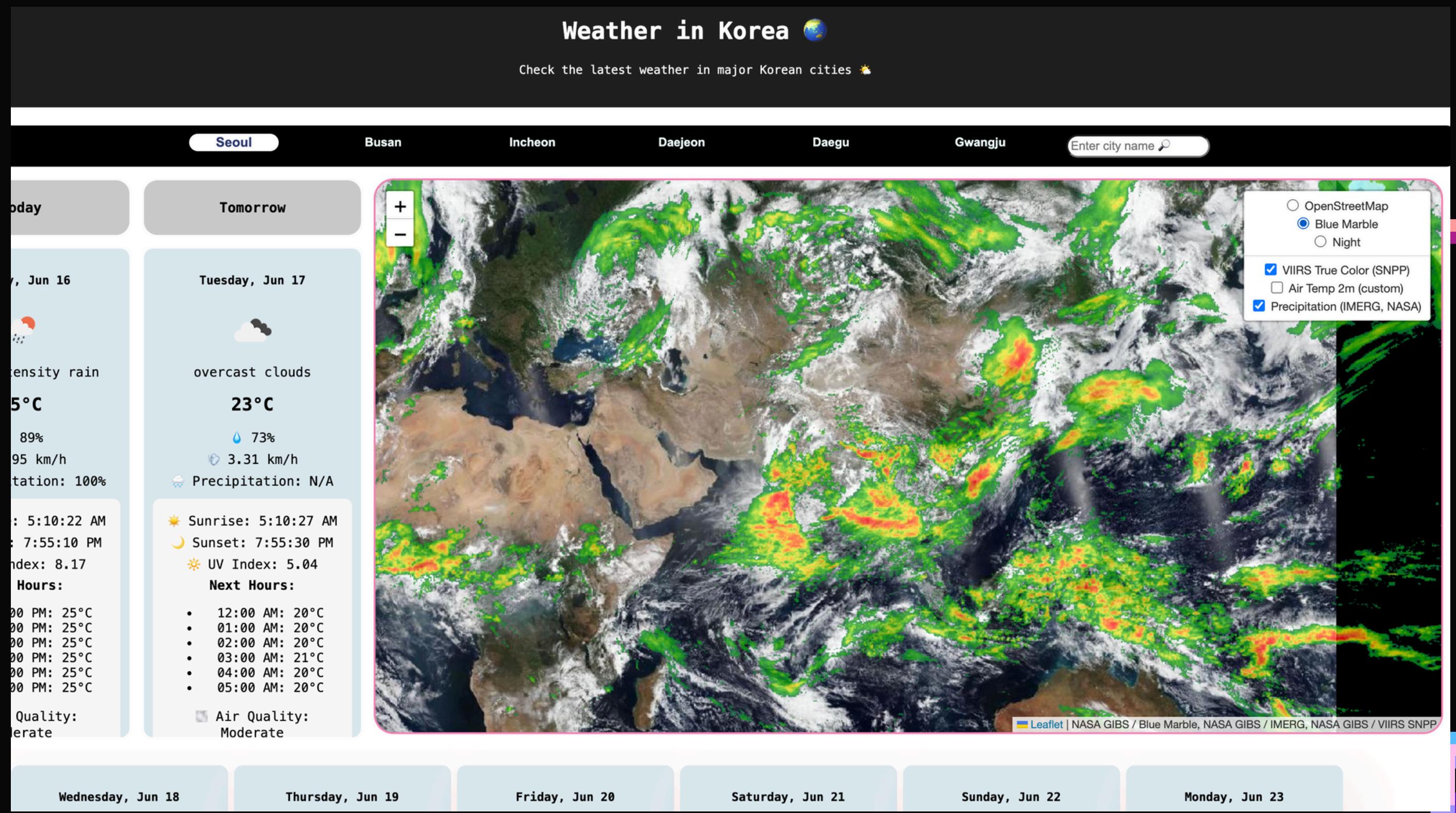
- Base map with NASA's Blue Marble satellite imagery
- Overlay true-color imagery updated daily
- Layer controls for easy switching on/off
- Zoom and pan to explore your city and surroundings



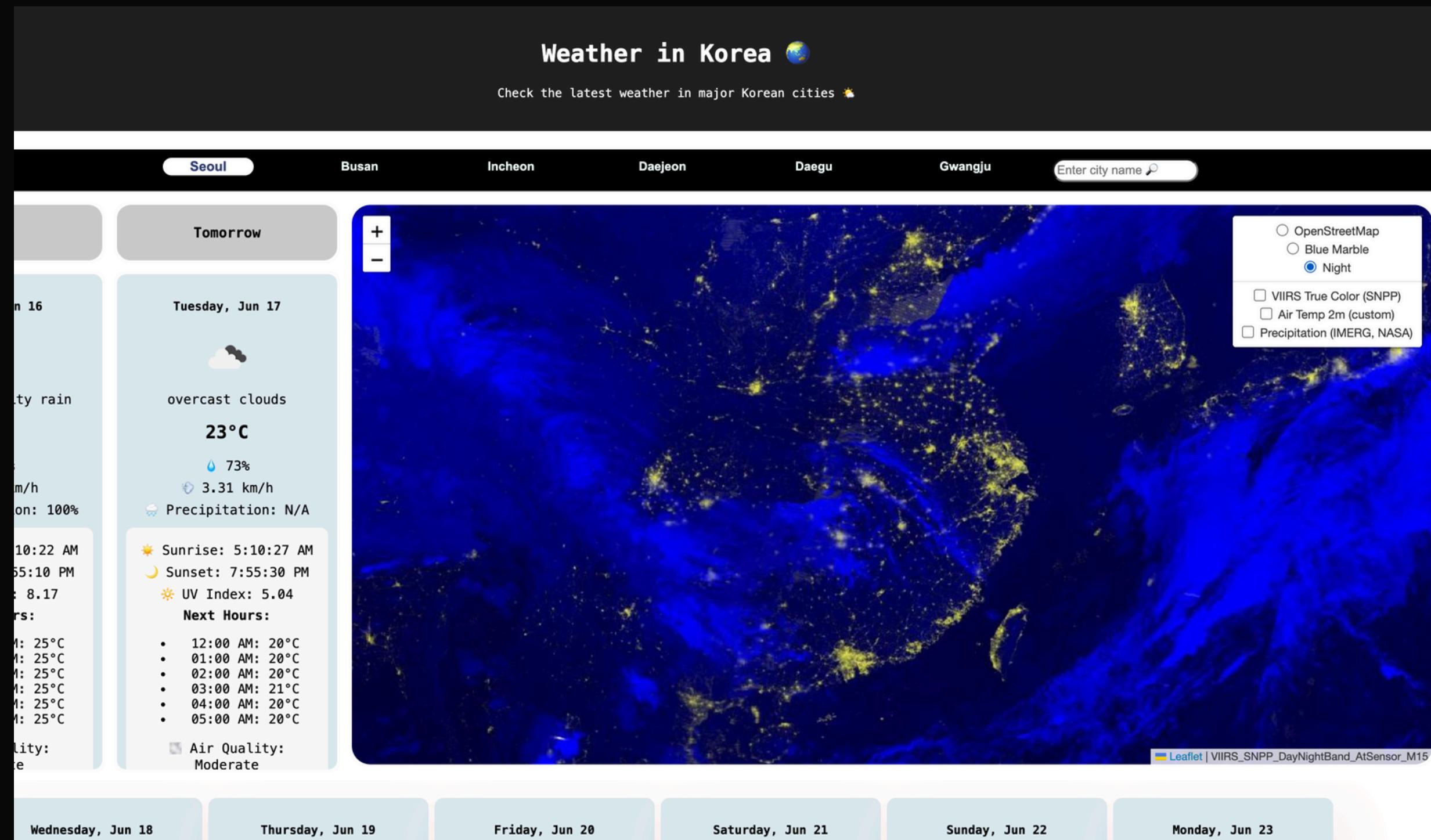
MORE MAPS



MORE MAPS



MORE MAPS



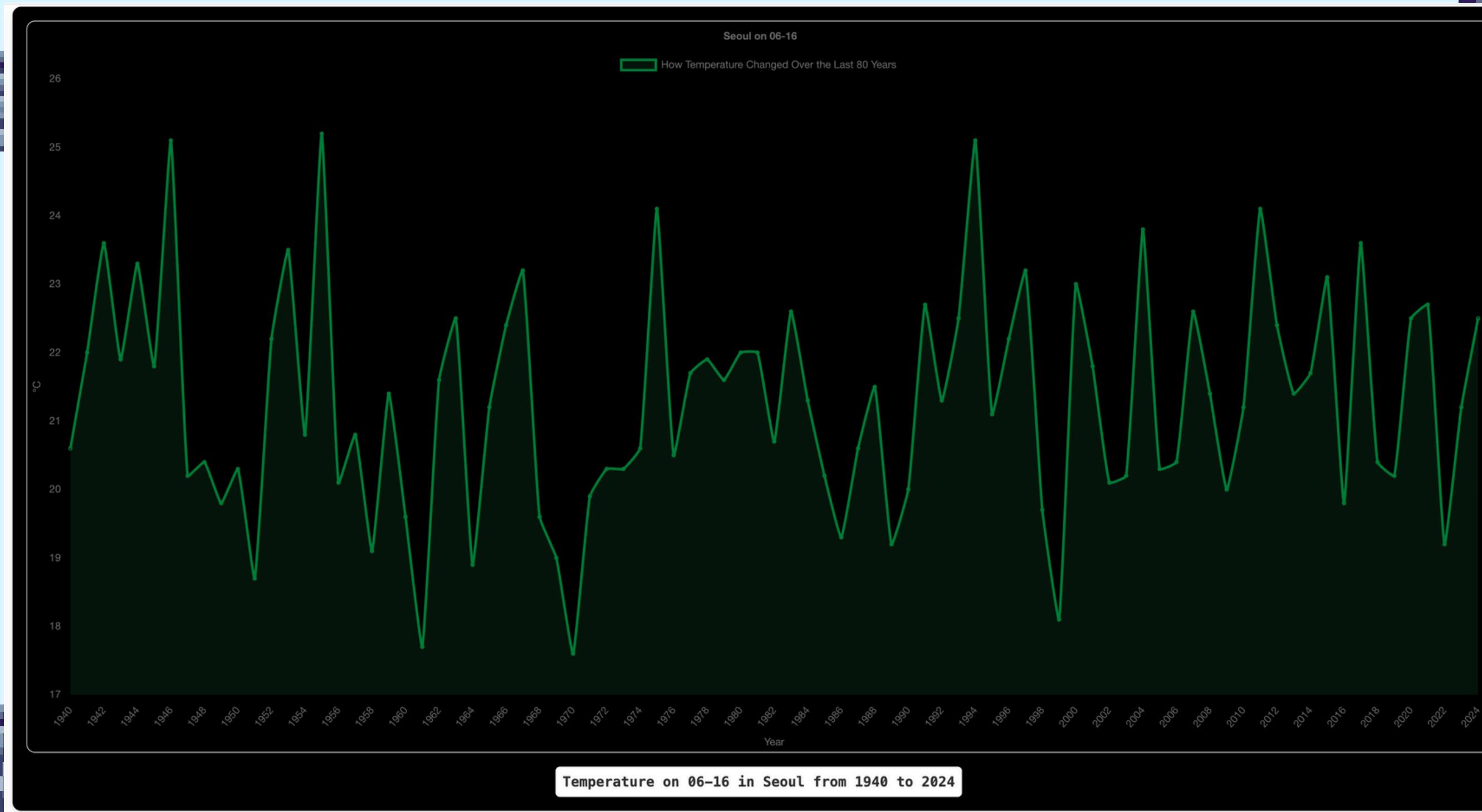


```
111 let map;
112 let baseLayer;
113 let overlayLayers = {};
114 let layerControl;
115 let activeOverlays = {} // Track which overlay is active
116 function initMap(lat, lon) {
117   const today = new Date().toISOString().split('T')[0];
118
119   // Define base layer (Blue Marble)
120   if (!baseLayer) {
121     baseLayer = L.tileLayer(
122       'https://gibs.earthdata.nasa.gov/wmts/epsg3857/best/BlueMarble_ShadedRelief/default/GoogleMapsCompatible_Level8/{z}/{y}/{x}.jpg',
123       {
124         attribution: 'NASA GIBS / Blue Marble',
125         tileSize: 256,
126         minZoom: 1,
127         maxZoom: 8
128       }
129     );
130   }
131
132   // Define overlay layers
133   overlayLayers["True Color (Today)"] = L.tileLayer(
134     'https://gibs.earthdata.nasa.gov/wmts/epsg3857/best/MODIS_Terra_CorrectedReflectance_TrueColor/default/${today}/GoogleMapsCompatible_Level9/{z}/{y}/{x}.jpg',
135     {
136       attribution: 'NASA GIBS / MODIS Terra',
137       tileSize: 256,
138       minZoom: 1,
139       maxZoom: 9
140     }
141   );
142
143   // Initialize map if not exists
144   if (!map) {
145     map = L.map('map').setView([lat, lon], 7);
146     baseLayer.addTo(map);
147
148   // Initialize all overlays on map if active
149   for (const name in overlayLayers) {
150     if (activeOverlays[name] === undefined) {
151       // Default: true for True Color overlay on first load
152       activeOverlays[name] = (name === "True Color (Today)");
153     }
154     if (activeOverlays[name]) {
155       overlayLayers[name].addTo(map);
156     }
157   }
158 }
```

```
32 <div class="top-row" style="display: flex; align-items: normal; gap: 1rem; text-align: center; height: max-content;">
33
34 <div><h3 style="flex: 0 0 15%; background-color: #ccc; border-radius: 15px; padding: 1rem;">Today</h3>
35 <div id="today"></div></div>
36
37 <div><h3 style="flex: 0 0 15%; background-color: #ccc; border-radius: 15px; padding: 1rem;">Tomorrow</h3>
38 <div id="tomorrow" ></div></div>
39
40 <div id="map" style="flex: 1; background-color: lightblue; border-radius: 20px; height: 580px;"></div>
41
42 </div>
```

WEATHER ON THIS DAY 80 YEARS AGO

Showing historical data from 1940 - 2024



PROCESS

- Uses OpenWeatherMap API for accurate weather and air quality data
- NASA GIBS WMTS service powers high-res satellite imagery
- Leaflet.js for a smooth and interactive map experience
- JavaScript logic loads data and updates UI dynamically
- Open Meteo for showing weather history in graph