



Caption:

The plot visualizes the daily minimum and maximum temperatures from 2005 to 2014, alongside temperature extremes in 2015 that either exceeded or fell below the recorded values from the previous decade. The red and blue lines represent the maximum and minimum temperatures, respectively, for the years 2005-2014. The shaded grey area between these lines highlights the typical temperature range observed during that period.

The scatter points in orange indicate days in 2015 where the maximum temperature exceeded the record highs from the previous decade, while the purple points represent days in 2015 where the minimum temperature fell below the record lows. This analysis allows us to observe how 2015 experienced several temperature anomalies, particularly in the early months of the year.

Visual Guidelines:

1. Clarity and Simplicity

- **Minimalist Design:** The plot uses clean lines and colors to convey the information without cluttering the space. By focusing only on two key trends (minimum and maximum temperatures from 2005-2014) and highlighting the anomalies in 2015, it simplifies the narrative for easy understanding.
- **Clear Labeling:** The x-axis (Day of Year) and y-axis (Temperature in °C) are clearly labeled to provide context for the viewer. Each scatter point is explained in the legend, ensuring that viewers can easily interpret what the dots represent.

2. Effective Use of Color

- **Color Contrast:** The visual uses contrasting colors for different elements (blue for minimum temperatures, red for maximum temperatures, orange for extreme highs in 2015, and purple for extreme lows). This helps to differentiate between the data points clearly without causing confusion.
- **Shading:** The grey shaded area between the minimum and maximum temperatures visually encapsulates the range within which the 2005-2014 temperatures fluctuate. This shading enhances the visual distinction between typical temperature ranges and the scatter points representing extreme temperatures in 2015.

3. Emphasizing Key Data

- **Highlighting Anomalies:** The use of orange and purple scatter points draws attention to temperature anomalies in 2015, which is the central insight of the analysis. By overlaying these points on top of the historical temperature lines, viewers can immediately identify where the 2015 data deviates from the norm.
- **Clear Focus on Outliers:** The visual design directs the viewer's attention to the most important data — the days when the 2015 temperatures broke previous records. The rest of the data (2005-2014 temperatures) provides essential context but is secondary in visual weight.

4. Consistency and Structure

- **Consistent Layout:** The line graphs and scatter plots maintain a consistent structure, helping viewers track changes across the year smoothly. The regular spacing of the x-axis tick marks (which represent months) ensures a uniform visual flow.
- **Balanced Legend:** The legend is clearly placed in the upper right, with color-coded labels corresponding to each element in the graph. This helps viewers quickly map visual elements to their meanings without having to search for explanations.

5. Accessibility

- **Readable Fonts and Sizes:** The font size used for the title, axis labels, and legend is large enough to be readable but not so large as to dominate the visual. The font choice is clean and sans-serif, ensuring readability.
- **Color Accessibility:** The color scheme avoids the use of confusing or overly similar colors. Additionally, the use of contrasting colors like orange and purple ensures that the visualization can still be interpreted correctly by people with color vision deficiencies.

6. Narrative Flow

- **Logical Progression:** The visual builds a narrative that progresses logically from the historical trends (2005-2014) to the anomalies (2015). The title, legend, and graph layout work together to tell the story of how temperatures in 2015 either broke previous records or fell below established lows.