

Data Visualization

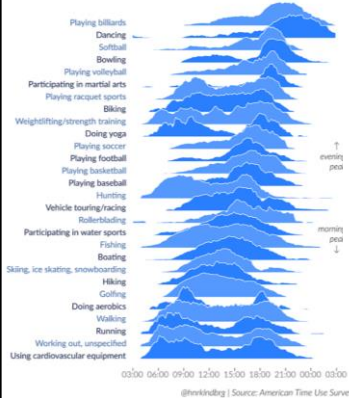
ASSIGNMENT 2: UPDATED RESULTS

Tea Tušar, Data Science and Scientific Computing, Information retrieval and data visualization

Peak time of day for sports and leisure (1 & 2)

Peak time of day for sports and leisure

Number of participants throughout the day compared to peak popularity. Note the morning-and-evening everyday workouts, the midday hobbies, and the evenings/late nights out.



Peak time for sports and leisure

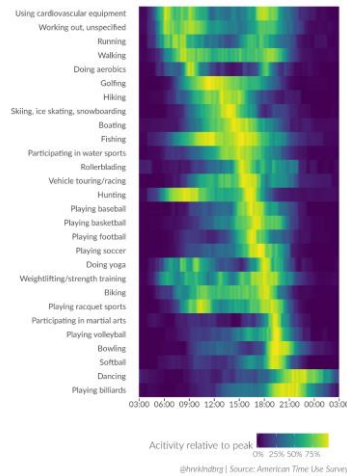
@henkhubing | Source: American Time Use Survey



<https://github.com/halhen/viz-pub/tree/master/sports-depeche-plot>

<https://github.com/halhen/viz-pub/tree/master/sports-time-of-day>

Peak time of day for sports and leisure (3)



<https://github.com/halhen/viz-pub/tree/master/sports-time-of-day>

3

Assignment 2: Make your own visualization

Data from <https://github.com/halhen/viz-pub/tree/master/sports-depeche-plot>

- o **activity.tsv** contains the relative number of participants throughout the day
- o **growth.tsv** contains the growth factor (visualized by line slope in the second visualization)

Visualize this data any way you want

6 + 4
visualizations

This is not a group task, work on it individually

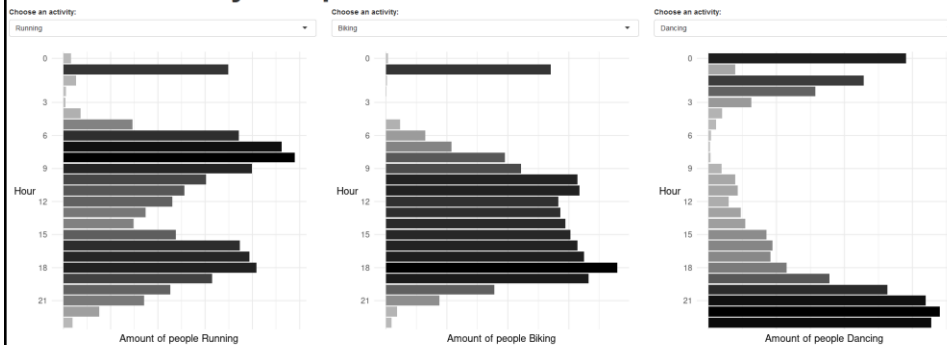
Send the visualizations to me via a private chat on Teams by **Friday, October 6 (first round)** or **Sunday, October 15 (second round)**

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First round

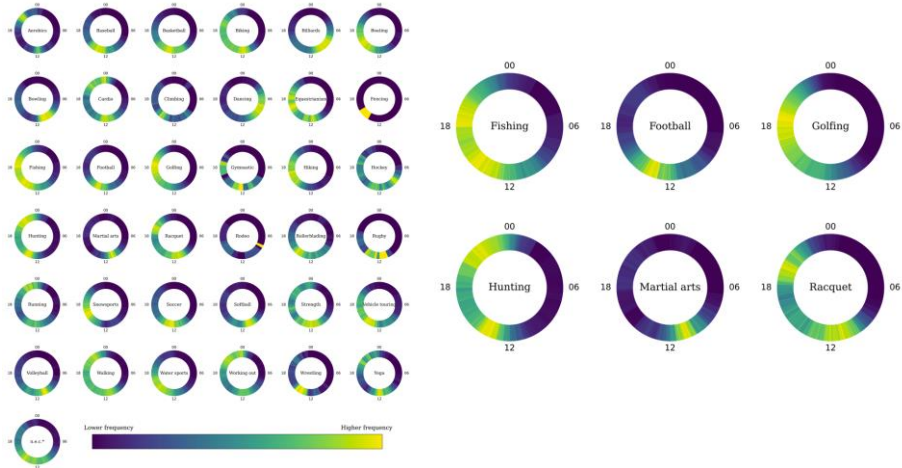
Interactive bar charts

Peak time of day for sports and leisure



The plots have been obtained by computing the mean frequency of people doing an activity, grouped by hours.
For instance, the group corresponding to hour 12 is composed of observations from 11:30 to 12:30.
Beware that the x-axis is not on the same scale among different plots, the purpose of this visualization is solely to analyze the peak time of the day for sports and leisures, without accounting for the actual amount of people doing such activities.

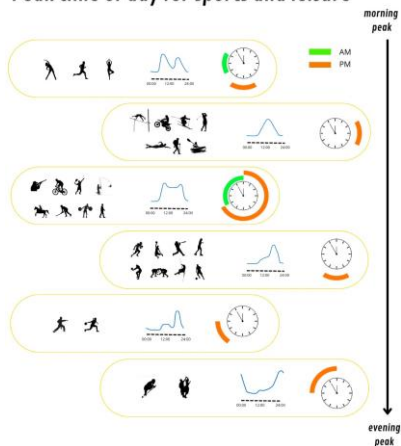
Small multiples of circular heatmaps



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Custom infographic

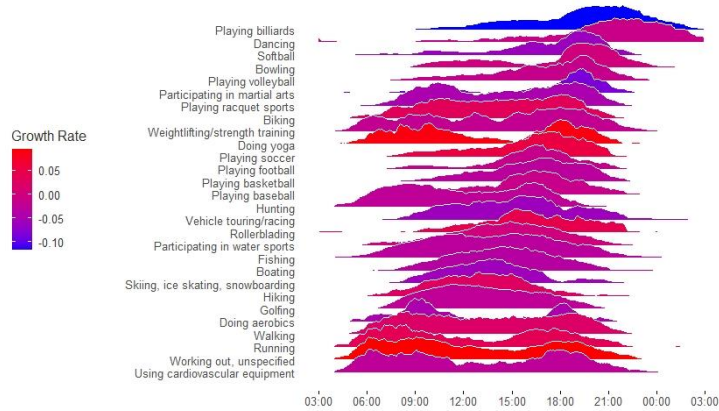
Peak time of day for sports and leisure



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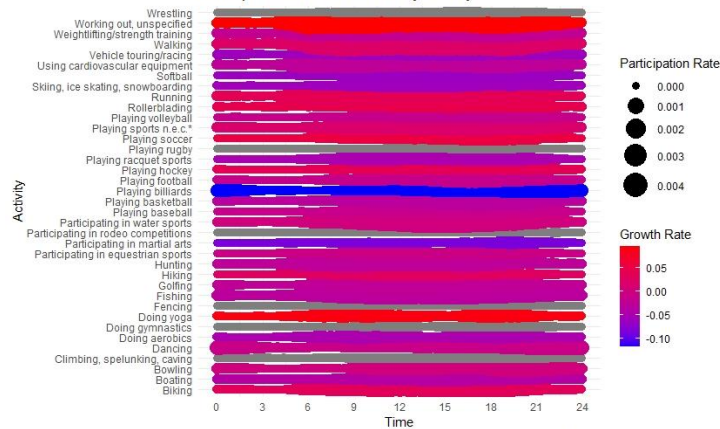
Small multiples of area plots

Peak time of the day and growth for sport and leisure



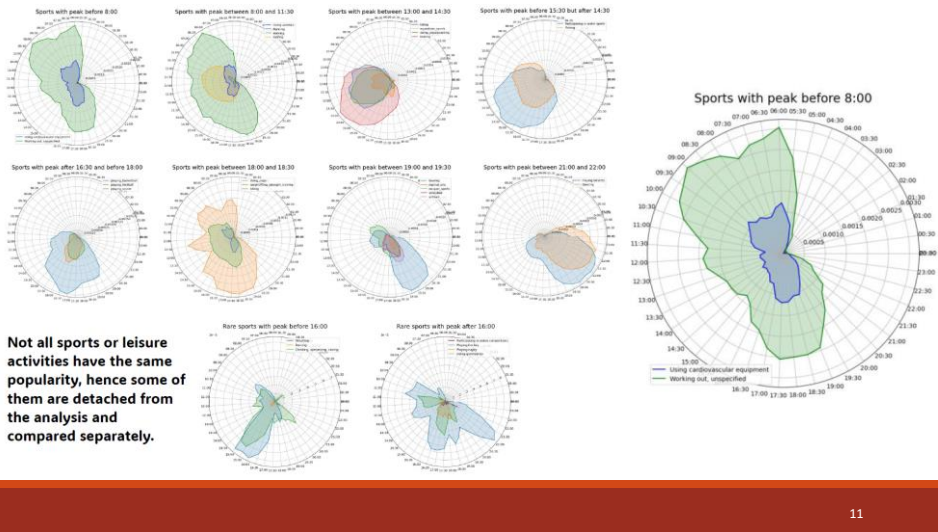
Small multiples of bubble charts

Participation Rate Over Time by Activity



Source: American Time Use Survey

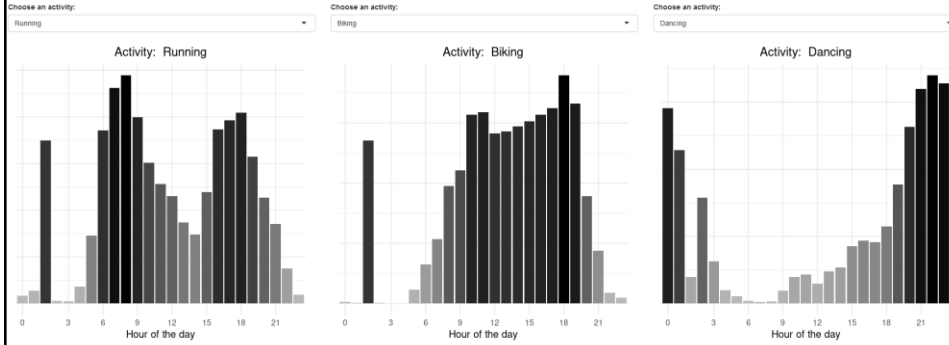
Small multiples of circular area plots



Second round

Interactive bar charts

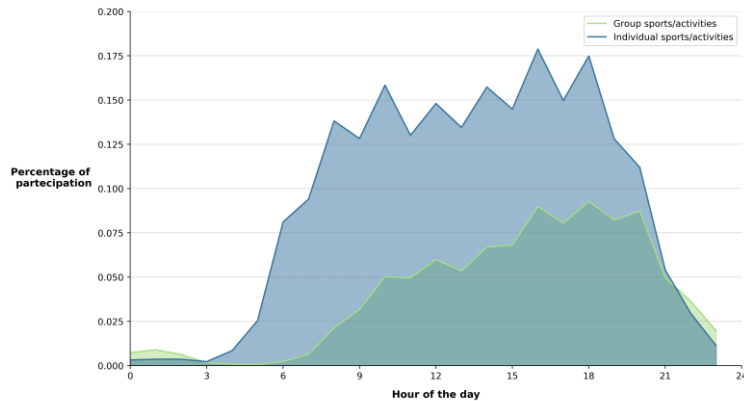
Peak time of day for sports and leisure



The y-axis represents the mean frequency of people doing an activity in the given time frame.
For instance, the time frame referring to hour 12 is composed of observations from 11:30 to 12:30.
The y-axis scales vary among plots; this visualization focuses on daily peak times for sports and leisure, ignoring the participant count.
[Data source](#)

Area chart

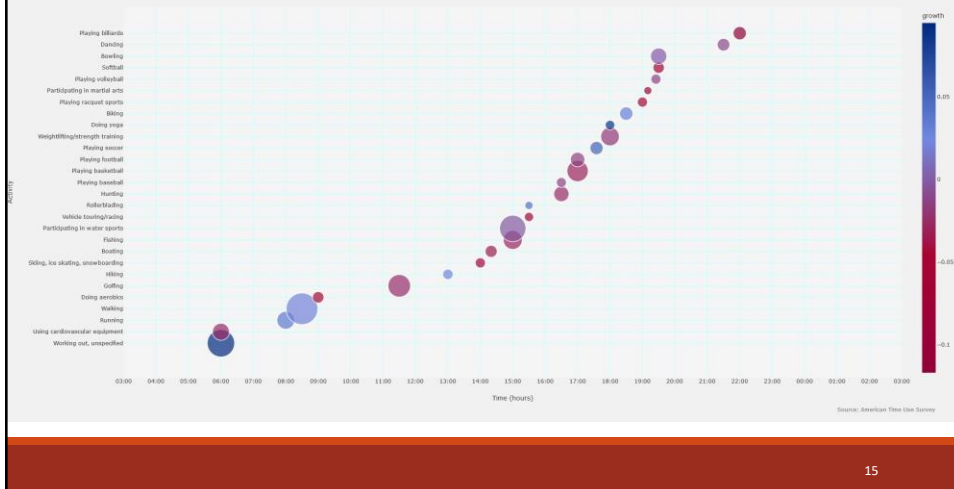
Individual vs group activities daily participation



Source: <https://www.kaggle.com/datasets/bls/american-time-use-survey>

Bubble chart

Activites' Peak Time Participation Rate and their Growth rate (2005-2010 period)



Custom infographic

When do Americans practice the most?

This infographic represents when a number of sports and leisure activities are practiced the most during daytime. In order to select the most practiced hours, just the fourth quartile for each activity practice time index was kept. Inside each box, activities are sorted in decreasing order with respect to the relative relevance of the hour.

Data source: <https://github.com/hahen/vissub/tree/master/sports-despche-plot>

