

# A Web-based Visualization Tool for the ASHRAE Global Thermal Comfort Database II

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## OBJECTIVE & BACKGROUND

- To provide an user friendly web-based interface to visually explore the ASHRAE Global Thermal Comfort Database II
- To allow users customize and compare subset of the database
- The visualization tool is built with R and it is an open resource available at:

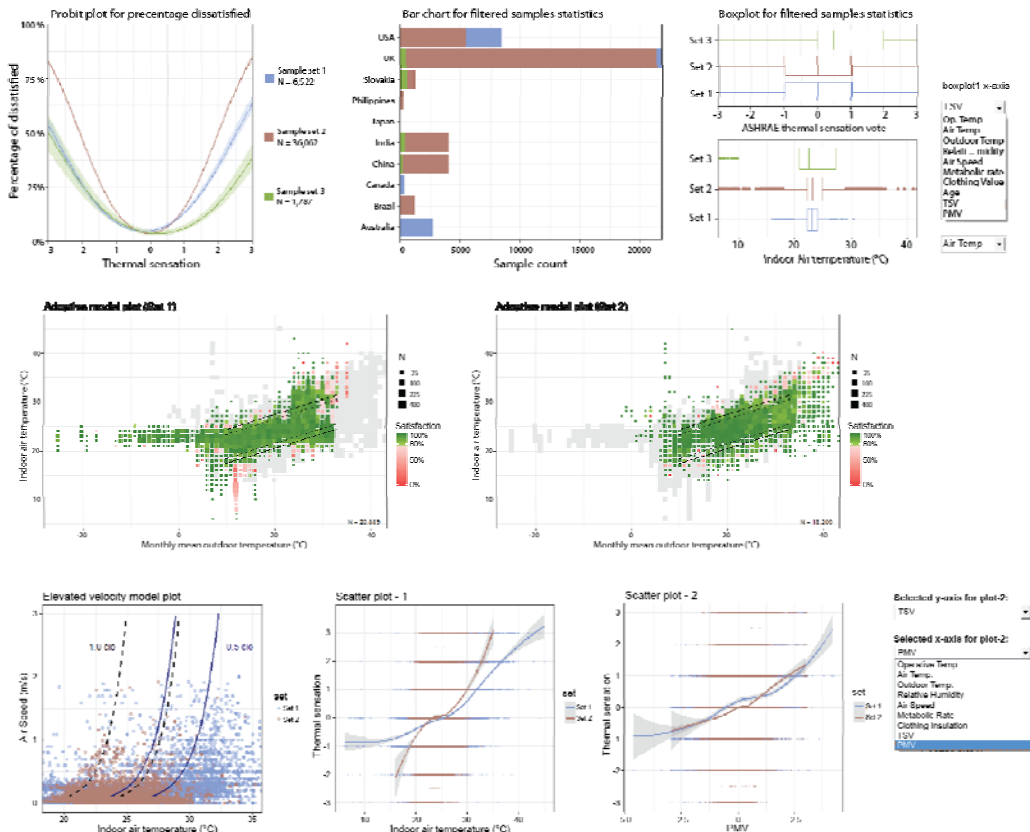
<https://cbe-berkeley.shinyapps.io/comfortdatabase/>

## DATASET SELECTION (four categories)

The image displays four panels of filter options for the dataset selection tool:

- Database:** Includes Database 1 and Database 2.
- Conditioning types:** Includes Air Conditioned, Mechanical Ventilated, Mixed Mode, Naturally Ventilated, and Undefined.
- Building types:** Includes Classroom, Multifamily housing, Office, Others, and Senior center.
- Seasons:** Includes Autumn, Spring, Summer, and Winter.
- Countries:** Includes Brazil, China, India, Japan, Slovakia, UK, and USA.
- Environmental filters:** Includes Monthly mean outdoor temperature, Indoor temperature, Radiant temperature, Operative temperature, Relative humidity, and Air speed.
- Human factors:** Includes Filter by blind (curtain) control, Available/Not available, Filter by fan control, Filter by window control, Filter by door control, Filter by heater control, Filter by sex, Filter by age, Filter by clothing insulation, and Filter by metabolic rate.

## VISUALIZATION OUTPUTS (three pages)



### Satisfaction page

Evaluates subject's thermal dissatisfaction on thermal sensation (or PMV) scale and shows summary statistics

### Adaptive model page

Compares selected dataset according to the adaptive thermal comfort model

### Scatter plot page

Plots raw data with the elevated velocity comfort zone and customizable x-y relationships

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