

# Theoretical Foundation of Visualization

Your Name

Latex is so lame. Cite shit Author [2023]here.

## 1 Figure Ocean and Zones

Suppose we have a function  $f : X_1 \times \dots \times X_n \rightarrow Y$ , we want to visualize its values but  $n$  is not small enough for us to visualize them in a gallery or an array.

Here we explain the method used in husky how to divide the visualization into zones.

An anchor  $a_i$  for  $X_i$  is either a specific point  $x \in X_i$  or a generic (means having more than one element) part (called page in implementation) of  $X_i$  with a moored point  $x_0$ . Basically an anchor is a subset of  $X_i$  with additional information. A sequence of anchors then represents a subset of the product space  $X_1 \times X_n$ .

The whole sequence of anchors  $(a_1, \dots, a_n)$  is going to be rendered as an ocean of figures, divided into zones of figures, where a figure zone is determined by a pair  $(i, j) \in [n] \times [n]$  with  $i \leq j$ , such that it's equivalent to the visualization of  $(a'_1, \dots, a'_i, a_{i+1}, \dots, a_j)$  where  $a'_l$  is the specific version of anchor  $a_l$ , where the moored point of the generic case is turned to the specific point.

## References

Some Author. Some relevant paper title. *Journal of Visualization*, 2023.