In this talk I will propose new tools for the geometric exploration of data objects taking values in a general separable metric space. First, I will introduce depth profiles, where the depth profile of a point \( \omega \) in the metric space refers to the distribution of the distances between \( \omega \) and the data objects. I will describe how depth profiles can be harnessed to define transport ranks, which capture the centrality of each element in the metric space with respect to the data cloud. Next, I will discuss the properties of transport ranks and show how they can be an effective device for detecting and visualizing patterns in samples of random objects. Together with the practical illustrations of this approach, I will establish theoretical guarantees for the estimation of the depth profiles and the transport ranks for a wide class of metric spaces. Finally, I will describe a new two sample test geared towards populations of random objects by utilizing the depth profiles corresponding to the data objects. I will demonstrate the utility of this new approach on distributional data comprising of a sample of age-at-death distributions for various countries and on functional Magnetic Resonance Imaging data. This talk is based on joint work with Yaqing Chen and Hans-Georg Müller.