We live in an exciting time where new data is generated at an exponential rate. Such data explosion necessitates the development of novel methods for studying large, noisy, and complicated data. One interesting aspect of data is its shape and structure. In this talk, we'll discuss what it means to study the shape of data using topological data analysis. We'll discuss various situations in which the shape of data provides valuable insights, including applications in networks science, image analysis, and neuroscience. The talk will be friendly -- no knowledge of topology is required. We will formulate everything using the language of linear algebra.