This talk will provide a general introduction to the space of null geodesics. I will begin with a discussion of the case of Minkowski space, a special case with a great deal of structure. After this, I will move on to the more general case of the space of null geodesics of space-time, modelled as a Lorentz manifold, beginning with the fundamental topological and differentiable structure. With this in place, we can introduce additional structure, and I will describe (some of) the interplay between the geometrical and causal structure of the original space-time and its space of null geodesics.