High resolution digital elevation models (DEMs) have proven useful in mapping geomorphic features indicative of past geologic hazards, such as sinkholes. Location mapping is necessary for studying factors controlling the development of sinkholes and also for city planning. Although sinkholes are easily discernible on high resolution DEMs by their rounded outlines, their large number has led to the investigation of automated mapping techniques to identify them. We use curvature, sphericity, and circularity to create a method to automatically identify sinkholes given DEM data from locations in Virginia. We will discuss our methods and results, as well as limitations and future work. (Received September 17, 2019)