In this survey we review the literature and concepts of the data mining of social networks, with special emphasis on their representation as a graph structure. The survey is divided into two principal parts: first we conduct a survey of the literature which forms the "basis" and background for the field; second we define a set of "hot topics" which are currently in vogue in congresses and the literature. The "basis" or background part is divided into four major themes: graph theory, social networks, online social networks and graph mining. The graph mining theme is organized into ten subthemes. The second, "hot topic" part, is divided into five major themes: communities, influence and recommendation, models metrics and dynamics, behaviour and relationships, and information diffusion.