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is of Navigation Assistants for Blind
sually Impaired People:
ematic Review

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Over the last few decades, the development in the field of navigation and routing devices a hindering task for the researchers to develop smart and intelligent guiding mechanism at outdoor locations for blind and visually impaired people (BVIPs). The existing research need ed from a historical perception including early research on the first electronic travel aids to odern artificial vision models for the navigation of BVIPs. Diverse approaches such as: e-cane , infrared-based cane, laser based walker and many others are proposed for the navigation of most of these techniques have limitations such as: infrared and ultrasonic based assistance has capacities for object detection. While laser based assistance can harm other people if it directly their eyes or any other part of the body. These trade-offs are critical to bring this technology o systematically assess, analyze, and identify the primary studies in this specialized field and verview of the trends and empirical evidence in the proposed field. This systematic research ormed by defining a set of relevant keywords, formulating four research questions, defining teria for the articles, and synthesizing the empirical evidence in this area. Our pool of studies most relevant articles to the proposed field reported between 2011 and 2020 (a portion of 2020 This systematic mapping will help the researchers, engineers, and practitioners to make more