Empowering Blind Navigation Through Innovative Sensor Technology

Jotyar, Soz (School: Slemani International Girls' Secondary School)

The Safe Sense Helmet project addresses the critical need for enhanced safety and independence among blind individuals through the development of a cutting-edge wearable device. The research question revolves around how advanced sensor technology can be leveraged to provide real-time navigational assistance and improve mobility for the visually impaired. The procedures involve the integration of sensors into a helmet prototype, iterative design improvements informed by user feedback, and collaboration with advocacy groups for validation and certification. Data collected includes user testimonials, feedback from stakeholders, and assessments of the helmet's effectiveness and usability. Interpretation of the data demonstrates the significant impact of the Safe Sense Helmet in increasing safety and independence for blind individuals, as well as fostering greater awareness and inclusivity within the blind community. Conclusions drawn from the research highlight the transformative potential of assistive technology in revolutionizing navigation for individuals with visual impairments. The Safe Sense Helmet offers promising research applications in the field of disability support, with potential for future advancements in sensor technology and broader societal impact.