

Design of Blind Aid-System to Assist Walk Around for Visually Impaired People



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Design of Blind Aid-System to Assist Walk Around for Visually Impaired People

This project report is submitted to the Faculty of Engineering, University of Management And Technology, Lahore, Pakistan, for the partial fulfillment of requirements for the degree.

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Bachelor of Science
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DEDICATION

We dedicate our dissertation work to our family and many friends. A special feeling of gratitude to our loving parents words of encouragement and push for tenacity ring in my ears. We also dedicate this dissertation to my many friends who have supported me throughout the process. I will always appreciate all they have done, Especially SIR ABDULLAH SAQLAIN SAHI for helping us to develop our technology skills, and for the many hours of proofreading. We dedicate this work for the people who are visually impaired and they are facing problems in their daily life.

Declaration

We declare that the work contained in this thesis is our own, except where explicitly stated otherwise. In addition this work has not been submitted to obtain another degree or professional qualification.

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ACKNOWLEDGEMENT

All praises to Almighty Allah, the real source of knowledge and wisdom. He who knows pre happening and afterwards. Warm hats off to our **parents**, worthy advisor SIR ABDULLAH SAQALAIN SAHI for providing us such an atmosphere to work out with the goals and achieving the target. We also praise our friends who supported us strategically, logistically, morally and financially too.

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Abstract

The main purpose of the project is to develop a vision system that will enable a person to navigate hallways and around large objects , through the use of an ultrasonic path finder that interfaces with the user via tiny vibrating motors mounted on the user's hand. The rationale behind this project was to develop a sensory system to enable the blind persons to navigate with the help of GPS, so they can walk around without carrying white cane. We also wanted to use one of the existing senses in helping out people.

The report initially gives the main idea about project. Then the development of hypothetical vision substitution for blinds and the research work done on it is documented. Further in report we have explained the problem statement and the logical structure for its solution. The hardware components used in the project are also mentioned along with a description of software approach used. Finally the results of testing and evaluation of our project are explained in detail. We have also discussed the future prospects of the hypothetical vision substitution for blinds.

This report also states the research on the effectiveness of the hypothetical vision substitution and different ways of increasing the touch sensation to provide a comfortable and better user experience. It provides the basis for a tactile interface that would be programmable as well, and provides the blinds with many useful applications.