

Home (<http://ipindia.nic.in/index.htm>) About Us (<http://ipindia.nic.in/about-us.htm>) Who's Who (<http://ipindia.nic.in/whos-who-page.htm>)
 Policy & Programs (<http://ipindia.nic.in/policy-pages.htm>) Achievements (<http://ipindia.nic.in/achievements-page.htm>) RTI (<http://ipindia.nic.in/right-to-information.htm>)
 Feedback (<https://ipindiaonline.gov.in/feedback>) Sitemap (<http://ipindia.nic.in/itemap.htm>) Contact Us (<http://ipindia.nic.in/contact-us.htm>)
 Help Line (<http://ipindia.nic.in/helpline-page.htm>)

[Skip to Main Content](#)



(<http://ipindia.nic.in/index.htm>)



(<http://ipindia.nic.in>)

Patent Search

Invention Title	A SPINE AND EYE SAFETY SMART CARE SYSTEM AND METHOD THEREOF
Publication Number	42/2023
Publication Date	20/10/2023
Publication Type	INA
Application Number	202341068488
Application Filing Date	11/10/2023
Priority Number	
Priority Country	
Priority Date	
Field Of Invention	BIO-MEDICAL ENGINEERING
Classification (IPC)	A61B0005000000, A61B0005110000, G08B0021240000, G01S0017100000, F21V0033000000

Inventor

Name	Address	Country
Dr. Amarana Prabhakara Rao	Professor, Department of Electronics and Communication Engineering (ECE), Koneru Lakshmaiah Education Foundation, Bowrampet, Hyderabad-500043, Telangana, India. Prayas ID (2021PC32/2021-2022/PR015), Nidhi Prayas, IIT Madras HTIC Med Tech Incubator	India
Dr. K.V. S. H. Gayatri Sarman	Associate professor, Department of ECE, Vishnu Institute of Technology, Vishnupur, Bhimavaram-534202, Andhra Pradesh, India	India

Applicant

Name	Address	Country
Dr. Amarana Prabhakara Rao	Professor, Department of Electronics and Communication Engineering (ECE), Koneru Lakshmaiah Education Foundation, Bowrampet, Hyderabad-500043, Telangana, India. Prayas ID (2021PC32/2021-2022/PR015), Nidhi Prayas, IIT Madras HTIC Med Tech Incubator	India
Dr. K.V. S. H. Gayatri Sarman	Associate professor, Department of ECE, Vishnu Institute of Technology, Vishnupur, Bhimavaram-534202, Andhra Pradesh, India	India

Abstract:

The spine and eye safety smart care system comprises a distance-monitoring module(102) equipped with IR proximity sensors, enhanced with LIDAR technology to monitor distance between the eyes of a user and a digital device or reading material; a posture-monitoring back-pad module(104) equipped with a second set of IR sensors(104) first set of pressure sensors(104B) to detect and monitor a spine position with augmented precision; a seat-pad module(106) equipped with a second set of pressure sensors(106A) to monitor a user's sitting posture; a central processing unit(108) coupled to a controller(108A) interfaced with Wi-Fi module (108B) to receive monitored detected data to determine a safe distance between the eyes of the user and the digital device or reading material and generate an alert notification upon measuring a duration of abnormal sitting posture and eye to device distance of the user greater than a threshold time duration.

Complete Specification**Description:FIELD OF THE INVENTION**

The present disclosure pertains to the field of health and ergonomics, specifically to a spine and eye safety smart care system and associated methods designed to enhance the well-being of students and working professionals, especially during prolonged periods of reading, writing, or digital device usage.

BACKGROUND OF THE INVENTION

In the evolving academic and professional spheres, reading and writing remain pivotal activities for school children, college students, and working professionals alike. the advent of technological advancements, digital devices have become an indispensable tool for many, significantly changing the way information is consumed and processed. However, this reliance on technology has posed various health challenges, particularly concerning eye and spine health.

When engaging in prolonged reading, writing, or digital screen viewing, it is imperative to ensure that the eyes remain comfortable, especially given the proximity to the material or screen. Equally crucial is the posture adopted during these activities. The manner in which individuals sit, the angle and distance at which a book or digital device is held, and the overall physical posture can dramatically influence the comfort and health of their visual system and spine. The correct posture can ensure not only physical ease but also a more focused and absorbing cognitive experience.

Recent trends and observations indicate a worrisome escalation in health challenges faced by the younger generation. A growing number of school-going children are

[View Application Status](#)



Terms & conditions (<http://ipindia.gov.in/terms-conditions.htm>) Privacy Policy (<http://ipindia.gov.in/privacy-policy.htm>)

Copyright (<http://ipindia.gov.in/copyright.htm>) Hyperlinking Policy (<http://ipindia.gov.in/hyperlinking-policy.htm>)

Accessibility (<http://ipindia.gov.in/accessibility.htm>) Archive (<http://ipindia.gov.in/archive.htm>)

Contact Us (<http://ipindia.gov.in/contact-us.htm>) Help (<http://ipindia.gov.in/help.htm>)

Content Owned, updated and maintained by Intellectual Property India, All Rights Reserved.

Page last updated on: 26/06/2019