

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202311054945 A

(19) INDIA

(22) Date of filing of Application :16/08/2023

(43) Publication Date : 15/09/2023

(54) Title of the invention : HELMET DETECTION USING AI

(51) International classification :G06K0009620000, G06N0003080000, G06N0003040000, A42B0003040000, G06T0007000000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

(71)Name of Applicant :
1)Chitkara University
 Address of Applicant :Chitkara University, Chandigarh-Patiala National Highway, Village Jhansla, Rajpura, Punjab - 140401, India. Patiala -----

2)Bluest Mettle Solutions Private Limited
Name of Applicant : NA
Address of Applicant : NA

(72)Name of Inventor :
1)MISHRA, Rahul
 Address of Applicant :ODC-4, Panchshil Tech Park, inside Courtyard by Marriott premises, Hinjewadi Phase - 1, Pune - 411057, Maharashtra, India. Pune -----

2)SINGH, Dhiraj
 Address of Applicant :ODC-4, Panchshil Tech Park, inside Courtyard by Marriott premises, Hinjewadi Phase - 1, Pune - 411057, Maharashtra, India. Pune -----

3)MANTRI, Archana
 Address of Applicant :Chitkara University, Chandigarh-Patiala National Highway, Village Jhansla, Rajpura, Punjab - 140401, India. Patiala -----

(57) Abstract :

The system in the present disclosure is an AI-based system for helmet detection (104) that leverages computer vision techniques to identify the presence of helmets in real-time. The system utilizes deep learning algorithms, specifically convolutional neural networks (CNNs), to analyse images or video frames and accurately detect whether a person is wearing a helmet or not. The system incorporates various features such as real-time detection, object localization, robustness to lighting conditions, and handling of occlusions. It aims to achieve high accuracy and precision in helmet detection (104), minimizing false positives and false negatives. The system is designed to be scalable, allowing for large-scale deployments and integration with existing infrastructure, such as security cameras and access control systems. It generates alerts and notifications (106) when a person is detected without a helmet, enabling prompt action and enforcement. The system also includes data logging and analytics capabilities to capture and analyse helmet usage data for further reporting and decision-making. Overall, this AI-enabled system for helmet detection (104) enhances safety and compliance in environments where helmet usage is critical, providing a reliable and efficient solution for monitoring and enforcing helmet policies.

No. of Pages : 26 No. of Claims : 10