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(54) Title of the invention : PERSONALIZED RECOMMENDATION SYSTEMS ENHANCED BY NATURAL LANGUAGE PROCESSING CAPABILITIES

<p>(51) International classification :G06Q0030020000, G06F0016953500, G06Q0030060000, G06F0016635000, G06N0020000000</p> <p>(86) International Application No :NA Filing Date :NA</p> <p>(87) International Publication No : NA</p> <p>(61) Patent of Addition to Application Number :NA Filing Date :NA</p> <p>(62) Divisional to Application Number :NA Filing Date :NA</p>	<p>(71)Name of Applicant : 1)Pooja Sharma Address of Applicant :Assistant professor, Department of CSE, Ajay Kumar Garg Engineering College, AKTU, Ghaziabad, Uttar Pradesh, India. Ghaziabad ---- ----- 2)Dr. Purushotam Naidu k 3)Dr. Lakshmana Rao Vadala 4)Mr. Udaya Kumar Addanki 5)S. Sumahasan 6)Dr. P Krishna Subba Rao 7)Dr. A. Sri Krishna Name of Applicant : NA Address of Applicant : NA</p> <p>(72)Name of Inventor : 1)Pooja Sharma Address of Applicant :Assistant professor, Department of CSE, Ajay Kumar Garg Engineering College, AKTU, Ghaziabad, Uttar Pradesh, India. Ghaziabad ----- ----- 2)Dr. Purushotam Naidu k Address of Applicant :Assistant Professor, Department of CSE (AI&ML), Andhra University, Visakhapatnam, Andhra Pradesh, India. Visakhapatnam ----- ----- 3)Dr. Lakshmana Rao Vadala Address of Applicant :Assistant Professor, Department of CSE, Andhra University, Visakhapatnam, Andhra Pradesh, India. Visakhapatnam ----- ----- 4)Mr. Udaya Kumar Addanki Address of Applicant :Assistant Professor, Department of Computer Science and Engineering, Andhra University, Visakhapatnam, Andhra Pradesh, India. Visakhapatnam ----- ----- 5)S. Sumahasan Address of Applicant :Assistant Professor, Department of Computer Science and Engineering, Andhra University, Visakhapatnam, Andhra Pradesh, India. Visakhapatnam ----- ----- 6)Dr. P Krishna Subba Rao Address of Applicant :Professor, Department of CSE, Gayatri Vidya Parishad College of Engineering (A), Andhra University, Visakhapatnam, Andhra Pradesh, India. Visakhapatnam ----- ----- 7)Dr. A. Sri Krishna Address of Applicant :Professor, Department of Artificial Intelligence, Shri Vishnu Engineering College for Women, Bhimavaram, West Godavari, Andhra Pradesh, India. Bhimavaram -----</p>
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(57) Abstract :
PERSONALIZED RECOMMENDATION SYSTEMS ENHANCED BY NATURAL LANGUAGE PROCESSING CAPABILITIES ABSTRACT Recommendation systems have indeed become integral in our digital lives, helping users discover content, products, and services that align with their preferences and needs. Here's a breakdown of the key points mentioned by introducing recommendation systems as information systems designed to suggest items to users based on their preferences and behaviour and briefly mention that the concept of recommendations is not limited to humans and has been observed in other creatures as well, which underscores its fundamental nature. And this invention highlight that people often rely on the opinions of others when making decisions, which has driven the development of recommendation systems that recommendation systems are applied in various domains, including general-purpose websites like Google and Yahoo, document recommendation systems, movie and music recommendation systems, and social recommendation systems. Different recommendation systems use various approaches to make suggestions, including factors like browsing history, geographical location, interests, user's behaviour on the web, purchase history, and entry points to a website. Overall, this invention provides a comprehensive overview of the importance and diversity of recommendation systems while hinting at the need for ongoing improvement in this field.

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(54) Title of the invention : Machine Learning-Based Helmet Violation and License Plate Recognition System with centroid tracking and OCR

(51) International classification :G08G0001017000, G06K0009620000, G06N0020000000, A42B0003040000, G08G0001040000

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(57) Abstract :
 ABSTRACT Motorcycle accidents have become a significant concern in many countries, with non-compliance with helmet usage being a leading cause of fatalities. Manual monitoring of helmet usage by traffic police has limitations, especially in densely populated cities. This necessitates the need for traffic monitoring systems that can detect non-helmeted riders without extensive manual efforts. To address this, a machine learning model has been developed to detect non-helmeted riders and identify number plates from video footage obtained from traffic cameras. The model utilizes the YOLO-Darknet framework and has been trained with a custom dataset comprising four object classes. The system incorporates a centroid tracking algorithm and Optical Character Recognition (OCR) technique to accurately identify non-helmeted riders and extract their number plate information. The system was implemented using Python Jupyter notebook on Google Colab. This automated system offers a promising solution for enhancing helmet compliance and improving road safety for motorcycle riders.

No. of Pages : 12 No. of Claims : 8

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PATENTS ACT, 1978

CERTIFICATE

accordance with section 44 (1) of the Patents Act, No. 57 of 1978, it is hereby certified that:

Prof. K.Raja Rajeswari; Mrs.N.Roopa Vathi; Dr. B.Leelaram Prakash

Has been granted a patent in respect of an invention described and claimed in complete specification deposited at the Patent Office under the number

2023/01840

A copy of the complete specification is annexed, together with the relevant Form P2.

In testimony whereof, the seal of the Patent Office has been affixed at Pretoria with effect from the 31st day of May 2023



A handwritten signature in black ink, appearing to be 'D.H.', is written over a dotted line.

Registrar of Patents

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FORM P2

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71	Full name(s) of applicant(s)/Patentee(s): (1) Prof. K.Raja Rajeswari; (2) Mrs.N.Roopa Vathi; (3) Dr. B.Leelaram Prakash				
71	Applicant(s) substituted:			Date registrered	
71	Assignee(s):			Date registrered	
72	Full name(s) of inventor(s): (1) Prof. K.Raja Rajeswari; (2) Mrs.N.Roopa Vathi; (3) Dr. B.Leelaram Prakash				
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54	Title of invention A SYSTEM FOR COMPOSITE WAVEFORM OF (GAUSSIAN AND RAYLEIGH) DISTRIBUTION FOR NLFM GENERATION AND METHOD THEREOF				
Address of applicant(s)/patentee(s): (1) Formerly Professor from Andhra University, Present Director (R & D), GVP College of Engineering for Women, Madhurawada, Visakhapatnam, Andhra Pradesh, 530048, India; (2) Assistant Professor, Department of Electronics and Communication Engineering, GVP College of Engineering for Women, Madhurawada, Visakhapatnam, Andhra Pradesh, 530048, India; (3) Professor, Department of ECE, Geethanjali College of Engineering and Technology, Cheeryala, Hyderabad, Telangana, 501301, India					
74	Address for service Sibanda and Zantwijk, Oaktree Corner, 9 Kruger Street, Oaklands (PO Box 1615 Houghton 2041), Johannesburg, 2192, SOUTH AFRICA Reference no.: PT_CP_ZA00007373 ([InsID:])				
61	Patent of addition No.			Date of any change	
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TITLE OF INVENTION

54 A SYSTEM FOR COMPOSITE WAVEFORM OF (GAUSSIAN AND RAYLEIGH) DISTRIBUTION FOR NLFM GENERATION AND METHOD THEREOF