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(54) Title of the invention : INTEGRATED MOBILE APPLICATION BASED SMART PARKING MANAGEMENT SYSTEM.

(51) International classification	:G08B 31/00	(71)**Name of Applicant :** **1)HIMALAYA SAVALIA** Address of Applicant :18-C, NAVAJEEVAN TENEMENTS, NEAR RAVIPARK CROSS ROAD, TARASALI, VADODARA,GUJARAT - 390009 Gujarat India **2)NIRMAL PATOLIA** **3)VAISHALI IYENGAR** **4)DR. DIPANKAR DEB** **5)SARAVANAN SENGUNTHAR**
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(87) International Publication No	: NA	(72)**Name of Inventor :** **1)HIMALAYA SAVALIA** **2)NIRMAL PATOLIA** **3)VAISHALI IYENGAR** **4)DR. DIPANKAR DEB** **5)SARAVANAN SENGUNTHAR**
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(57) Abstract :
With the advent of increase in vehicles across the world, especially in large cosmopolitan cities, parking has become a huge matter of concern. Vehicle owners are finding it a menace at public spaces to park their vehicles safely. The poor parking management at public places and miserable parking sense amongst public has worsened the situation. ˜Integrated mobile based smart parking management system™ rightly addresses this problem. With the help of an integrated mobile application, sitting in car, the user can avail the details of empty parking slots in the periphery even without entering the parking plots. With minimal or no human intervention, this invention helps in easy, yet effective parking for both the owners as well as the management, with the help of an integrated mobile application, GPS navigation, e-wallets, barcodes, barcode scanners, number plate scanners. This invention is an idea to implement efficient and organized parking management of vehicles at large commercial, residential areas, public parking lots, and multilevel parking areas.

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(54) Title of the invention : AUTOMATIC HELMET AND NUMBER PLATE DETECTION SYSTEM.

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(57) Abstract :
The present invention deals with automatic helmet and number plate detection system. In the current road network scenario human safety is of paramount importance, considering the fact helmets are to be made mandatory while driving. The number plate of a vehicle holds the information of the owner and in any case of theft, robbery or smuggling accurate number plate detection can help the authorities take quick action. This invention detects helmet and number plate on the vehicle along with the correct number plate format by taking account the vehicle type i.e. LMV, HMV or trucks. The invention uses Mega-pixel cameras placed at a distance of 50-100 m to capture the high-resolution images and extracts the number plate characters from the number plate. Also, this invention takes into account the over speeding cases in case the vehicle exceeds the limit. The image classification is done using machine learning algorithms like artificial neural networks, support vector machines etc.

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(54) Title of the invention : DEVELOPMENT OF ARTIFICIAL SANDSTONE AND MATRIX FOR DETERMINING BEHAVIOUR OF SANDSTONE IN HERITAGE STRUCTURES

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(57) Abstract :
Increasing growth of urbanisation, industrialisation, rapid development causes negative impact on Heritage Structures. This rapid growth causes deterioration, weathering, erosion and decay of Heritage Structures. These Heritage Structures are built thousands of years ago so the stone which is used for construction may /may not be available, due to continuous mining and excavation. If stone is not available, then replacement or rehabilitation of structure is done by using improper stone or stone which is available nearby or with cheaper stone. So, general identification and characterisation of stone is required. If stone is not available, then there is a need to develop artificial stone for retrofitting and rehabilitation of Heritage Structures. Artificial Sandstone provides exact characteristics and properties of stone which is as same as the stone which is used for construction of Heritage Structures. Manufacturing process of artificial sandstone is similar to other building material like bricks and concrete, but here particles are bound using calcium and magnesium silicates and sulphates, kaolin, clinoptilolite, fly ash, geo polymers and synthetic polymers like epoxy and by heating and compression artificial sandstones are prepared. Matrix provides information about properties of natural sandstone. So, any sandstone can be identified without performing any geological or geo-technical tests. Powder form of artificial sandstone can also be pasted on deteriorated and eroded small sculptures components.

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