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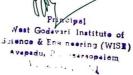
Facial Emotions Recognition using Convolutional Neural

Dr.M.Aravind Kumar M. Chilakaiah N.L Tejaswini

**Network** 



Dr. M. Aravind Kumar obtained B. Tech Degree in CEC. M.Tech Degree in VLSI System Design from JNTUH, and Ph.D. from GITAM University. Visaknapatnam. He is working at the WEST GODAVARI INSTITUTE OF SCIENCE AND ENGINEERING as a Principal. He Published 45 Research Papers in refereed Journal and Conferences.



Jaience & Eng neering (WISE)





This book summarizes as an unmanned Aerial Vehide (UAV) is a type of alroaft that has no pilot or passenger on board. UAVs include autonomously controlled (drones), and piloted vehicles (RPVs) controlled via a radio transmitter. Multirotor UAVs (unmanned aerial vehicles), namely quadcopters and hexacopters, have become increasingly popular in recent years. This book provides Over time, an increased understanding of the many factors that contribute to the risk of fire and has led to positive developments in the fire protection of commercial structures. Improvements in public fire protection systems and services, as well as increased use of private active or passive systems through fire protection and loss-control engineering, have meant an overall decrease in the cost of fire. The main focus of this system is its Automatic way of sowing the seeds. The seeds are been sowed in a proper sequence which results in the proper germination of seeds.



Dr.MAravind Kumar

FIREFIGHTING AND

AGRICULTURE SEED SPREADING DRONE



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Vest Godavari Institute of
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Avapadu, Perkasaraepalem
W. G. (A.P.)



This book summarizes that with the increasing number of vehicles in urban areas, many road networks are fading problems with the capacity drop of roads and the corresponding Level of Service. Many traffic-related issue occur because of traffic control systems at intersections that use fixed signal timers. In condusion, the proposed system sets the green signal time adaptively according to the traffic density at the signal and ensures that the direction with more traffic is aborted a green signal for a longer duration of time as compared to the direction with lesser traffic. This will lower unwanted delays and reduce congestion and waiting time, which in turn will reduce fuel consumption and pollution.



Dr.M.Aravind Kumar P. Sheela



Dr. M. Aravind Kumar obtained B. Tech Degree in ECE, M.Tech Degree in VLSI System Design from INTUH, and Ph.D. from GITAM University, Visakhapatnam. He is working at the WEST GODAVARI INSTITUTE OF SCIENCE AND ENGINEERING as a Principal. He has 16 years of teaching experience. He is a Life member of HE, ISTE, IETE, SCIEI, UACEE, and JAENG.



SMART CONTROL OF TRAFFIC LIGHT USING DEEP LEARNING



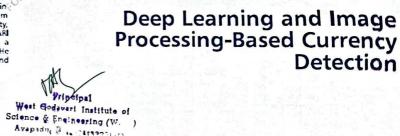




P. Sheela J.Sri Mahalakahmi



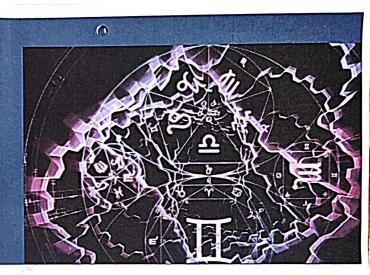
Dr. M. Aravind Kumar obtained B. Tech Degree in CRAUTHORS
ECE, M Tech Degree in VISI System Design from JNTUH, and Ph.D. from GITAM University, Visakhapatnam He is working at the WEST GODAVARI INSTITUTE OF SCIENCE AND ENGINEERING as a Principal He has 15 years of teaching experience. He is a Life member of HE, ISTE, TETE, SCIEI, UACEE, and IAENG.











Machine Learning Based Power Utilization Prediction

MAravind Kumar T.Durga Devi G.Phani Madhuri



Dr. M. Aravind Kumar obtained B. Tech Degree in ECE, M Tech Degree in VLSI System Design from JNTUH, and Ph.D. from GITAM University, Visakhapatnam He is working at the WEST GODAVARI INSTITUTE OF SCIENCE AND ENGINEERING as a Principal He has 15 years of teaching experience. He is a Life member of HE, ISTE, TETE, SCIEI, UACEE, and JAENG.

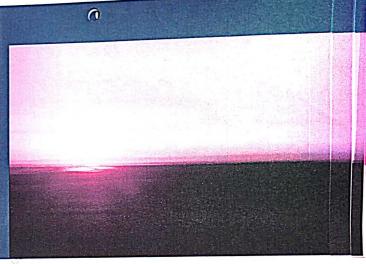








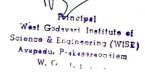
This book summarizes Undersea acoustic communications have drawn a lot of attention recently as their uses start to transition from military to commercial. The acoustic properties of the ocean are characterized by their tremendous complexity and dynamic nature. The parameters such as depth, temperature, salinity, location, time of day, and season of the underwater medium influences the acoustic signal propagation. However, these medium parameters are varying arbitrarily depending upon shallow and deep-water divisions of the ocean. In addition to the medium parameters, the characteristics of the acoustic channel (transmission loss, absorption and multi-path) are affected by variation in the acoustic signal speed in underwater. The influence of the aforementioned parameters alters the velocity of acoustic transmission, which affects network connectivity. Because research in the undersea environment is expanding rapidly, proficient channel modelling is required to demonstrate the effect of sound speed variations with respect to medium parameters.



MAravind Kumar



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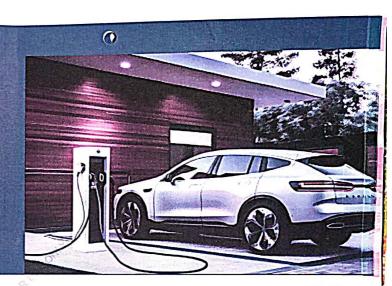


AN ACOUSTIC CHANNEL MODEL FOR DIRECT AND MULTIPATH MODELS IN DEEPWATER





This book summarizesThe Electric Vehicle is preferred mainly because it is less expensive and environmental friendly. But it comes with the problem of battery overcharge and deep discharge. This problem affects battery life and performance over the years. To overcome this problem, the proposed system gives the prototype for Battery Monitoring System for Bytery Childes (EV), in which different battery parameters such as voltage, current, power and the temperature are monitored by using various sensors. The measured battery parameters i.e., voltage, current, power and temperature data is sent to the Arduino UNO and the battery information is displayed on LCD and communicated to the user through Android smartphones. If the temperature exceeds the threshold value, then thermoelectric plates will automatically on and cool down the battery. The proposed system is also supported with a dual battery mechanism so that if one battery gets discharged then another battery will automatically connect. This mechanism helps in back up of the power when one battery is discharged.



MAravind Kumar K.Bala Sindhuri



Dr. M. Aravind Kumar obtained B. Tech Degree in ECE, M. Tech Degree in VLSI System Design from JNTUH, and Ph.D. from GITAM University, Visakhapatnam He is working at the WEST GODAVARI INSTITUTE OF SCIENCE AND ENGINEERING as a Principal. He has 15 years of teaching experience, He is a Life member of HE, ISTE, TETE, SCIEI, UACEE, and IAENG.

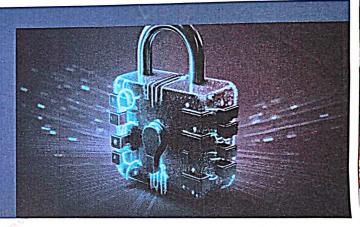


### BATTERY MONITORING SYSTEM FOR ELECTRIC VEHICLES





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MAravind Kumar



Dr. M. Aravind Kumar obtained B. Tech Degree in ECE, M Tech Degree in VISI System Design from JNTUH, and Ph.D. from GITAM University, Visaknapatham He is working at the WEST GODAVARI INSTITUTE OF SCIENCE AND ENGINEERING as a Principal, He has 15 years of teaching experience. He is a Life member of HE, ISTE, TETE, SCIEI, UACEE, and JAENG.

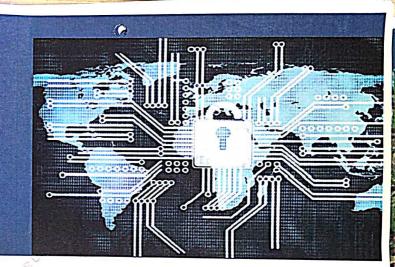


A data analytics approach to the cybercrime underground economy Science & Engineering (WI)





This book summarizes that information technology is significant in supporting computer applications to many users and establishments worldwide like information security, information hiding, and information retrieval. All users, who use multimedia such as images, audio, video, and text, may need to protect information from attacks while sending on receiving them through channels. The proposed algorithm gives good results by applying some statistical tests as well the proposed algorithm achieved encryption rates of about 0.134136 and 0.106204 for decryption rate. Finally, it is possible to encrypt partial images instead of full image encryption. Also, it can be applied as a block opher instead of a stream cipher to get good results. As well as it can be developed by compression of the plain image with an image key to reducing the cost of data transition.



MAravind Kumar



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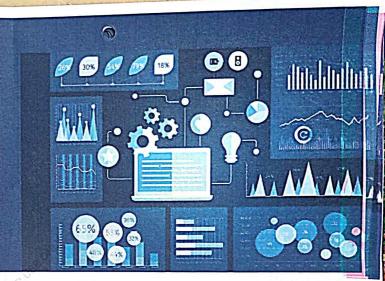
## FAST IMAGE ENCRYPTION BASED ON RANDOM IMAGE KEY



Principal
West Gadavari Institute of
Science & Engineering (WISE)
Avapadu, Prikasaraopalem
V., (n. P.)



This book summarizes The primary concern of supervised hashing is to convert the original features into short binary codes that can maintain label similarity in the Hamming space. Due to their strong generalization capabilities, non-linear hash functions have shown to be superior than linear ones. Kernel functions are frequently utilized in the literature to create non-linear hashing, which results in encouraging retrieval performance but long evaluation and training times. Here, we suggest using boosted decision trees, which are quick to train and assess and are hence more suited for hashing with high dimensional data. As part of continuous improvement, we first suggest sub-modular formulations for the hashing binary code inference issue as well as an effective block search technique based on Graph Cut for large-scale inference. Then, we train boosted decision trees to suit the binary codes in order to learn hash functions. Experiments show that in terms of retrieval precision and training duration, our suggested strategy greatly surpasses the majority of state-of-the-art methods.



MARAVIND KUMAR



Dr. M. Aravind Kumar obtained B. Tech Degree in ECE, M. Tech Degree in VLSI System Design from JNTUH, and Ph.D. from GITAM University, Visakhapatnam He is working at the WEST GODAVAN INSTITUTE OF SCIENCE AND ENCINEERING as a Principal. He has 15 years of teaching experience. He is a Life member of HE, ISTE, TETE, SCIEI, UACEE, and IAENG.

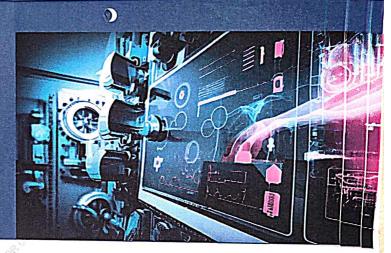


OBJECT CLASSIFICATION
USING FAST SUPERVISED
HASHING FOR HIGH
DIMENSIONAL DATA





Inis book summarizes Major operations are performed to remove or reconstruct the infected parts in the human body. These operations will lead to blood loss and pain. Therefore, it is necessary to arrest the pain and the blood loss. Anesthesia plays an important role in the part of painkilling. In which microcontroller is made use of to perform anesthesia injecting operation, where the quantity to be injected and the time at which the drug should be injected is provided. The Microcontroller displays the quantity to be injected and the time in the display device. Syringe infusion pump is mechanically connected to the motor.



MAravind Kuman K.M.Unnisha Begum

# Dr. M. Aravind Kumar obtained 8, Tech Degree in ECE, M Tech Degree in VISI System Design from JNTUH, and Ph.D. from GITAM University, Visakhapatnam He is working at the WEST GODAVARI INSTITUTE OF SCIENCE AND ENGINEERING as a Principal He has 15 years of teaching experience.





IOT Based Anaesthesia Injector through Robot



MAravind Kumarr

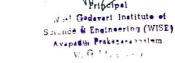
**IOT BASED SMART** 

AGRICULTURE SYSTEM



Dr. M. Aravind Kumar obtained B. Tech Degree in CLEE, M.Tech Degree in VIA System Design from INTUH, and Ph.D. from GIFAM University, Visachapatham. He is working at the WEST GODAVARI INSTITUTE OF SCIENCE AND ENGINEERING as a Principal. He has 15 years of teaching experience. He is a Life member of HE, ISTE, IETE, SCIEI, UACEE, and JAENG.









This book summarizes the research suggests a novel method that significantly enhances higher-order statistical algorithms for blind digital modulation identification (DMI) (HOS). In order to perform an offset on higher-order moments (HOM) and obtain an estimate of noise-free HOM, the suggested method makes use of noise power estimation. The suggested method will perform previous DMI algorithms that are based only on cumulants or do not take into account HOM denoising when tested for multiple antenna systems, even for a receiver with impairments. The improvement will be made while maintaining the same level of HOS-based DMI complexity in the same situation, Modulation identification is the step that succeeds energy detection and precedes signal demodulation. When both source signals and channel parameters are unknown, we are in a blind context that naturally requires a blind process of modulation recognition. Despite their high identification accuracy, maximum-likelihood-based techniques for modulation identification often suffer from the substantially high complexity. Feature-based algorithms of modulation identification give an alternative that provides a good performance.



MAravind Kumate

## Identification of Blind Digital Modulation in Multiple-Antenna Systems



Dr. M. Aravind Kumar obtained B. Tech Degree in ECE, M Tech Degree in VLSI System Design from JNTUH, and Ph.D. from GITAM University, Visakhapatnam He is working at the WEST GODAVANI INSTITUTE OF SCIENCE AND ENGINEERING as a Principal. He has 15 years of teaching experience. He is a Life member of HE, ISTE, TETE, SCIEI, UACEE, and IAENG.



West Godevari Institute of Science & Engineering (WISE)
Avapadu, Prakasareopalem
W. G. Di (A. P.)



This book summarizes the In this project work, Design and Implementation Of High Speed and high Accuracy Novel Multiplier using PPA is implemented. Approximate circuits are becoming an effective solution to accurately operating circuits if energy efficiency is concerned, and the application is error tolerant. One of the primary features that help us determine the computational power of a processor is the speed of its arithmetic unit. PPA adder architecture therefore greatly enhances the speed of the overall process. This proposed system has less delay and requires less area, and its efficiency is compared with some of previous approximate and accurate multipliers in terms of power, area and delay. The corresponding architecture based on the proposed algorithm is then synthesized by Xiinx ISE and it is observed that the proposed structure has lower area-delay complexity than the best of existing designs.



MAravind Kuma



Dr. M. Aravind Kumar obtained B. Tech Degree in C. ECE, M Tech Degree in VIST System Design from JNTUH, and Ph.D. from GITAM University, Visakhapatnam He is working at the WEST GODAVAN INSTITUTE OF SCIENCE AND ENGINEERING as a Principal He has 15 years of teaching experience. He is a Life member of HE, ISTE, TETE, SCIEI, UACEE, and JAENG.



DESIGN HIGH SPEED AND HIGH ACCURACY NOVEL MULTIPLIER





This book summarizes the India's agriculture sector is significant. It is necessary for the Indian economy's survival and expansion. India is a significant producer of many different agricultural goods. In the process of cultivating crops, soil is crucial. A non-renewable, dynamic natural resource required for life is soil. The selection of the right crop based on the needs of the soil is a common issue faced by young Indian farmers. They experience a significant decline in productivity as a result. Earlier crop cultivation used to be done by farmers with practical experience. Based on the qualities and properties of the soil, farmers are no longer able to select the ideal crop. Therefore, a recommendation system that uses a machine learning algorithm to suggest the crop that can be harvested in that specific soil has been developed. In the proposed system, we process the user- supplied image of the soil and dassify it into one of four classifications of soil: Red, Alluvial, Black, and Clay. A MobileNetV2 Architecture model accomplishes this. Several crops that can be grown in that soil type are recommended when the soil type is forecasted.



MAravind Kunha



Dr. M. Aravind Kumar obtained B. Tech Degree in ECE, M Tech Degree in VLSI System Design from JNTUH, and Ph.D. from GITAM University, Visakhapatnam He is working at the WEST GODAVARI INSTITUTE OF SCIENCE AND ENGINEERING as a Principal. He has 15 years of teaching experience. He is a Life member of FIE, ISTE, TETE, SCIEI, UACEE, and JAENG.

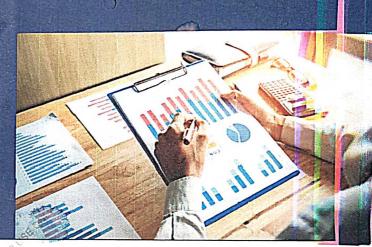


West Godavari Institute of Science & Engineering (WiSi) Avapadu, Prekasaraopalem W. G. Dt. (A. P.)

#### SOIL ANALYSIS AND CROP RECOMMENDATION USING MACHINE LEARNING



This book summarizes the A relay network is a wide dass of network configuration which is often used in wireless networks, where the source node and destination node cannot communicate directly and are interlinked with the help of some nodes. The different methods by which the relay networks are implemented in the system are known as relaying techniques. In this paper, we have presented the spectral efficiency and BER performance analysis of the MIMO-OFDM wireless system with different relaying techniques in Rayleigh fading channel. The simulated results for different modulation schemes are presented. The obtained results have shown that the hybrid relaying technique provides better spectral efficiency and bit error rate (BER) performance as compared to the other relaying techniques.



M. Aravind Kumar.



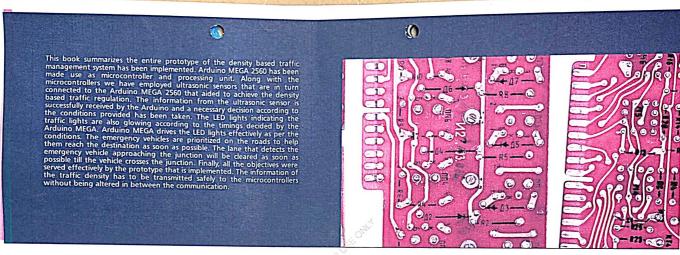
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Avapadu, Prakasaraepalem
W. G. Dt. (A. P.)





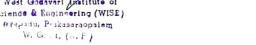
K. M. Unnisha Begum



K.M.Unnisha begum M.Tech, assistant professor in the Department of ECE in West Godavari Institute of Science & Engineering Tadepalligudem, Andhrapradesh. Earlier from 2011-2023 with more than 12 years of teaching experience, she authored 10 technical papers. Her area of research interest in VLSI &EMBEDDED SYSTEMS.



**Density Based Traffic** Controlling System for **Emergency Vehicles** 







Fractal segmented lotus shape planar monopole antenna for multiband applications is proposed. The overall size of the proposed design is about 28mm x 35mm x 1.6mm. The proposed antenna has been designed on FR - 4 and the dielectric constant of 4.4, thickness of 1.6mm and loss of tangent is 0.02. Fractal techniques has imposed to increase the number of bands and wide bandwidth. The applications of the proposed antenna are satellite communications, defence tracking, air traffic control, weather monitoring. The proposed antenna is designed and simulated by using the HFSS software. Keywords – Rectangular Microstrip Antenna, Fractal, Leaf shape, Lotus structure, Multiband, FBW, HFS.

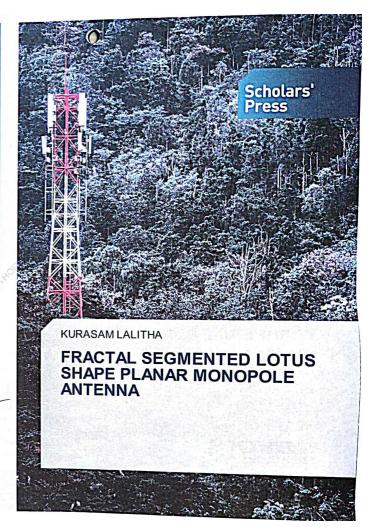


Kurasam lalithaAssistant Professor, West Godavari Institute of Science & Engineering at Tadepalligudem march 2021 to till date. Responsibilities included teaching technical education courses at the undergraduate and graduate lewels, teaching VLSI design, analog communication, computer networks. She has teaching experience of 2 years.



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Anusha Basamsetti



Anusha Basamsetti, Assistant Professor West Godavari Institute of Science & Engineering at Tadepalligudem Jun-2019 to till date. Responsibilities included teaching technical education courses at the graduate levels, teaching Mobile communications, control systems. She has supervision in communications and having teaching experience of 12 years.





West Godaver Institute of Science & Engineering (WISE) Avapadu, Prakasaraopalem W. G. Dt. (A. P.)





Power dissipation is increasingly becoming a concern nowadays as the computing power is increased and the number of transistors switching has increased. With more power dissipated in the form of heat, different cooling techniques have to be adopted. The ever famous logic for implementing different functions is CMOS logic. CMOS is known for its low static power consumption. The problem with CMOS is it has very large switching power consumption, which directly depends upon the switching frequency.



Anusha Basamsetti, Assistant Professor, West Godavari Institute of Science & Engineering at Tadepalligudem, Jun-2019 to till date. Responsibilities included teaching technical education courses at the graduate levels, teaching Mobile communications, control systems. She has supervision in communications and having teaching



Anusha Basamsetti

Design and Implementation of 4-BIT Shift Register Using 2PASCL Logic

West Godvar Institute of Schees & Enety-oring (WS)

Avapadu, Pricasapaplam



This Book summarizes the experimental prototype of the embedded image-capturing system with Raspberry Pi system. The graphics capabilities of the Raspberry Pi are roughly equivalent to the level of performance of the Xbox of 2001. The Raspberry Pi chip, operating at 700 MHz by default, will not become hot enough to need a heat sink or special cooling. The SoC is stacked underneath the RAM chip, so only its edge is visible. Level 2 cache is 128 KB, used primarily by the GPU, not the CPU. This system is smaller, lighter and with lower power consumption, so it is more convenient than the PC-based face recognition system. Because of the open-source code, it is freer to do software development on Linux Experimental results show that it's an effective method of using a Raspberry Pi board to actualize an embedded image-capturing system.



K.M.Unnisha Begum M.TECH, Assistant Professor in the department of ECE in West Godavari Institute of Science & Engineering, Tadepalligudem, Andhra Pradesh. Earlier from 2011-2023 with 12 years of teaching experience, she authored 10 technical papers. Her area of research interest is VLSI, EMBEDDED SYSTEMS.



West Gidevari Matita Science & Endincering Avapadu, Prakasaraop W. G. Dt. (A. P.)

