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Embedded Projects

Global Techno Solutions – GTS, a software development and solution providers concern renders technology solutions to a diverse range of customer. Beginning its journey in the field of information technology in the year 2003, GTS operates with the integrity to the highest standards of business conduct.

Key Benefits to Students:

- ➢ Internship Projects from industry Experts with 19 years of Experience.
- ➢ IEEE Latest Papers with Complete Documentation and Review Materials.
- ➢ Projects in wide range of Domains.
- ➢ Module wise Demo and Laptop Configuration.
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- ➢ Certificates will be provided (Confirmation, Completion and LOR)
- ➢ 100% Online Support.
- ➢ Supporting Journal Publishing (i.e. IEEE, Scopus etc.,)

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Artificial Intelligence(AI)

1. [An AI-Based Visual Aid With Integrated Reading Assistant for the Completely Blind.(Trans Dec 2020)](#)
2. Design and Analysis of IoT-Based Intelligent Robot for Real-Time Monitoring and Control.(Conf May 2020)
3. [Security Surveillance Bot for Remote Observation During Pandemics.(Conf July 2020)](#)
4. [A Smart Wireless System to Automate Production of Crops and Stop Intrusion Using Deep Learning.(Conf Oct 2020)](#)
5. Real-Time Family Member Recognition Using Raspberry Pi for Visually Impaired People.(Conf Nov 2020)
6. [ET-based Irrigation System with Automated Bird Deterrent System.(Conf Oct 2020)](#)
7. [Design and Implementation of Portable Smart Wireless Pedestrian Crossing Control System.(Access June 2020)](#)
8. An Efficient Sign Language Translator Device Using Convolutional Neural Network and Customized ROI Segmentation.(Conf 2019)
9. [Raspberry Pi based voice-operated personal assistant (Neobot).(Conf 2019)](#)
10. [Road Sign Recognition System for Autonomous Vehicle using Raspberry Pi.(Conf 2019)](#)
11. [Smart Home with Virtual Assistant Using Raspberry Pi. (Conf 2019)](#)
12. [A LoRa-based Smart Street lighting System for Smart Cities.(Conf 2019)](#)
13. Development Architecture for the Intelligent Animal Care and Management System Based on the Internet of Things and Artificial Intelligence. (Conf 2019)

Robotic OS (ROS)

14. Intelligent Hotel ROS-based Service Robot.(Conf Sep 2019)
15. SLAM Algorithm Analysis of Mobile Robot Based on LiDAR.(Conf July 2019)

16. ROS based Autonomous Mobile Robot Navigation using 2D LiDAR and RGB-D Camera. (Conf Jan 2019)

17. Study of ROS Based Localization and Mapping for Closed Area Survey. (Conf May 2019)

18. Gilbreth 2.0: An industrial cloud robotics pick-and-sort application.(Conf 2019)

Internet Of Things (IoT)

19. An IoT-Based Intelligent System for Real-Time Parking Monitoring and Automatic Billing.(Conf 2020)

20. Battery Management System Using State of Charge Estimation: An IOT Based Approach.(Conf 2020)

21. Biometric Based Smart ATM Using RFID.(Conf Oct 2020)

22. Design and Analysis of IoT based Air Quality Monitoring System.(Conf May 2020)

23. IOT Based Smart Helmet for Construction Workers.(Conf May 2020)

24. Design of Intelligent Unlocking System in Computer Room Based on Embedded Technology. (Conf June 2020)

25. Automated Poultry Farm with Microcontroller based Parameter Monitoring System and Conveyor Mechanism. (Conf June 2020)

26. Advanced Wireless Control & Feedback Based Multi-functional Automatic Security System.(Conf Nov 2020)

27. Design and Development of IOT Based Prototype Police Barricade.(Conf Oct 2020)

28. Intelligent Ambulance with Automatic Traffic Control.(Conf Nov 2020)

29. Development and Analysis of Pothole detection and Alert based on Node MCU .(Conf April 2020)

30. Internet of Things Mobile–Air Pollution Monitoring System (IoT-Mobair). (Trans June 2019)

31. IoT Based Intelligent Industry Monitoring System. (Conf 2019)

32. Smart Waste Collection Monitoring and Alert System via IoT. (Conf 2019)

33. A Prototype Air Flow Control System for Home Automation Using MQTT Over Web socket in AWS IoT Core. (Conf 2019)

34. IoT Based HOME AUTOMATION Using Node red. (Conf 2019)

35. Web Monitoring and Speed Control Of Solar Based Bldc Motor With IoT. (Conf 2019)

36. Smart Assistance Library System for the Disabled: An IOT based User-Friendly Wheelchair. (Conf 2019)

37. A Personal Health Care Office Chair. (Conf 2019)

38. Indoor Positioning System for IoT Device based on BLE Technology and MQTT Protocol. (Conf 2019)

39. Vehicle Parking Guidance for Wireless Charge Using GMR Sensors. (Trans Aug 2018)

40. SSL Smart Street Lamp based on Fog Computing for Smarter Cities. (Trans Nov 2018)

41. SEAT Secure Energy Efficient Automated Public Transport Ticketing System. (Trans March 2018)

42. Design of on-line interactive data acquisition and control system for embedded real time applications. (Conf 2018)

43. IoT-Driven Automated Object Detection Algorithm for Urban Surveillance Systems in Smart Cities. (Trans April 2018)

44. Design and Implementation of Advanced ARM7 Based Biometric security system using wireless communication. (Conf 2018)

45. Self Parking car prototype. (Conf 2018)

Raspberry PI

46. Easy Band A Wearable for Safety-Aware Mobility during Pandemic Outbreak - IEEE Journals & Magazine.(Preprint 2020)

47. Wheelchair control through eye blinking and IoT platform.(Conf April 2020)

48. Camera and Biometric based Vehicle Monitoring System for Public Safety.(Conf Nov 2020)

49. Design and Implementation of a Smart Bike Accident Detection System.(Conf Nov 2020)

50. A real time, wireless and low cost data acquisition system for residential PV modules.(Conf Oct 2020)

51. Driver Behavior Monitoring and Warning With Dangerous Driving Detection Based on the Internet of Vehicles.(Access July 2020)

52. Optick - A Low Cost Wearable Head Up Display For Search And Rescue Operations.(Conf July 2020)

53. Realtime Wireless Embedded Electronics for Soldier Security.(Conf Sep 2020)

54. Design of Visual Navigation System of Farmland Tracked Robot Based on Raspberry Pie. (Conf 2019)

55. Automated Linear Book-Scanning System (ALBS).(Conf 2019)

56. SMARISA A Raspberry Pi Based Smart Ring for Women Safety Using IoT.(Conf 2019)

57. Real-Time Driver-Drowsiness Detection System Using Facial Features. (Trans Sep 2019)

58. A Smart Home Appliance Control System for Physically Disabled People.(Conf 2019)

59. GLOS: GLOve for Speech Recognition.(Conf 2019)

60. Smart Mirror using Raspberry Pi as a Security and Vigilance System.(Conf 2019)

61. Deep Learning Aided System Design Method for Intelligent Reimbursement Robot.(Access Jul 2019)

62. Vehicle Theft Tracking, Detecting And Locking System Using Open CV.(Conf 2019)

63. Voice Recognition by Google Home and Raspberry Pi for Smart Socket Control.(Conf 2018)

64. Internet of Things for Smart Railway: Feasibility and Applications.(Trans April 2018)

65. Smart Garbage Segregation & Management System Using Internet of Things (IoT) & Machine Learning (ML).(Conf 2019)

66. Mechatronic System to Help Visually Impaired Users During Walking and Running.(Trans Feb 2018)

67. Effective Natural Communication between Human Hand and Mobile Robot using Raspberry-pi.(Conf 2018)

68. Voice Activated Semi-Autonomous Vehicle Using Off the Shelf Home Automation Hardware. (Trans July 2018)

69. An intelligent walking stick for the visually challenged people.(Conf 2018)

70. Design of Smart Home Environment Monitoring System Based on Raspberry Pi.(Conf 2018)

71.   A Text Reader for the Visually Impaired using Raspberry Pi.(Conf 2018)

Social Cause

72.   IoT based Smart Bin_ A Swachh-Bharat Initiative.(Conf Aug 2020)

73.   A Natural User Interface and Block chain-Based In-Home Smart Health Monitoring System.(Conf 2020)

74.   Design and Analysis of IoT based Air Quality Monitoring System.(Conf May 2020)

75.   Social Engineering and Prototype Awareness Enhancing During International Coronavirus Outbreak.(Conf July 2020)

76.   Design of IoT Embedded Smart Energy Management System .(Conf March 2020)

77.   EYERIS_ A Virtual Eye to Aid the Visually Impaired .(Conf July 2020)

78.   IoT Based Smart Multi Application Surveillance Robot .(Conf Sep 2020)

79.   The Research on Transformer Fault Early Warning Model Based on Internet of Things.(Conf July 2020)

80.   A VANET-IoT based Accident Detection and Management System for the Emergency Rescue Services in a Smart City.(Conf June 2020)

81.   IoT based smart garbage monitoring & collection system using We Mos & Ultrasonic sensors.(Conf 2019)

82.   An Analysis of Li-Fi based Prevalent Automated Billing Systems in Shopping Malls.(Conf 2019)

83.   Human-Robot Interaction with Smart Shopping Trolley Using Sign Language: Data collection.(Conf 2019)

84.   A Cost Effective Design and Implementation of Arduino Based Sign Language Interpreter.(Conf 2019)

85.   Design and Implementation of Women Auspice System by Utilizing GPS and GSM.(Conf 2019)

86.   An Astute Assistive Device for Mobility and Object Recognition for Visually Impaired People.(Trans Oct 2019)

87. [Analysis of Smart helmets and Designing an IoT based smart helmet: A cost effective solution for Riders.(Conf 2019)](#)

88. Roadside Magnetic Sensor System for Vehicle Detection in Urban Environment.(Trans May 2018)

89. On improving GlovePi Towards a many-to-many communication among deaf-blind users.(Conf 2018)

90. Smart Wearable Hand Device for Sign Language Interpretation System With Sensors Fusion.(Trans Feb 2018)

LoRaWAN

91. An Autonomous Hand Hygiene Tracking Sensor System for Prevention of Hospital Associated Infections.(Preprint 2020)

92. [LoRa (Long Range) and LoRaWAN Technology for IoT Applications in COVID-19 Pandemic.(Conf Nov 2020)](#)

93. IoT-based Health and Farm Monitoring System via LoRa-based Wireless Sensor Network. .(Conf Nov 2020)

94. A LoRa-based Dual-CPU Core Salton Sea Environmental Monitoring Wireless Sensor System.(Conf July 2020)

95. LoRa-based Visual Monitoring Scheme for Agriculture IoT.(Conf 2019)

96. Development of intelligent street lighting services model based on LoRa technology.(Conf 2018)

97. Design and implementation of an automated and decentralized pollution monitoring system with Block chains, smart contracts, and Lora WAN.(Sym 2018)

98. Development of a shoe-based dementia patient tracking and rescue system.(Conf 2018)

99. LoRa based renewable energy monitoring system with open IoT platform.(Conf 2018)

100. WE-Safe A wearable IoT sensor node for safety applications via LoRa.(Conf 2018)

Augmented Reality

101. Wireless IoT Motion-Recognition Rings and a Paper Keyboard.(Access 2019)

102. Sense Pods A Zigbee-based Tangible Smart Home Interface.(Preprint 2018)

103. A Calibration Method for On-Vehicle AR-HUD System Using Mixed Reality Glasses.(Conf 2018)

104. Driver Assistance System Using Augmented Reality Headset.(Conf 2018)

LiDAR

105. Lidar-based Obstacle Avoidance for the Autonomous Mobile Robot.(Conf 2019)

106. Automatic Vehicle Tracking with Roadside LiDAR Data for the Connected-Vehicles System.(Conf 2019)

107. Autonomous Obstacle Avoidance Vehicle Using LIDAR and an Embedded System.(Conf 2019)

WUSN-Wireless Under Soil Network

108. A WUSN-based Smart System for Water Flow Control. (Conf Aug 2020)

109. Survey on Advances in Magnetic Induction based Wireless Underground Sensor Networks.(Trans Dec 2018)

110. Internet of Underground Things: Sensing and Communications on the Field for Precision Agriculture.(Conf 2018)

111. Internet of Things (IoT) for Smart Precision Agriculture and Farming in Rural Areas.(Trans Dec 2018)

LI-FI

112. A Novel RF (XBee) and IR LoS (Line-of-Sight) Collaborative Vehicle-to-Vehicle Navigation Technique.(Conf 2018)

113. Enhanced design of visible light communication sensor for automotive applications Experimental Demonstration of a 130 meters link.(Conf 2018)

114. Appliance Automation Using LiFi with MQTT in Hybrid Star & Tree Network Setup.(Conf 2018)

115. The role of Wi-Fi in Li-Fi hybrid networks based on Blind Interference Alignment.(Conf 2018)

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Matlab With Hardware

116. Compressed-Domain Highway Vehicle Counting by Spatial and Temporal Regression.(Trans Jan 2019)

117. BSDP: Big Sensor Data Preprocessing in Multi-Source Fusion Positioning System Using Compressive Sensing.(Trans sep 2019)

118. Aggregation of Users in a Residential/Commercial Building Managed by a Building Energy Management System (BEMS) .(Trans Feb 2019)

119. Parking Space Status Inference Upon a Deep CNN and Multi-Task Contrastive Network With Spatial Transform.(Trans April 2019)

120. Wearable system based on flexible FBG for respiratory and cardiac monitoring.(Trans Sep 2019)

121. Interpixel Interference Mitigation Using Differential Coding in Vehicular Visible Light Communication Based Image Sensor.(Conf 2018)

122. IoT-based real-time poultry monitoring and health status identification.(Conf 2018)

123. IoT-based Remote Pain Monitoring System: from Device to Cloud Platform.(Trans Nov 2018)

124. Algorithms for Monitoring Heart Rate and Respiratory Rate From the Video of a User's Face.(Journ 2018)

125. IC Solder Joint Inspection Based on an Adaptive-Template Method.(Trans June 2018)

Robotics

126. QuicaBot: Quality Inspection and Assessment Robot.(Trans April 2019)

127. Towards Semi-Autonomous and Soft-Robotics Enabled Upper-Limb Exoprosthetics First Concepts and Robot-Based Emulation Prototype.(Conf 2019)

128. Restaurant Serving Robot with Double Line Sensors Following Approach.(Conf 2019)

129. Voice Operated Intelligent Fire Extinguishing Vehicle.(Conf 2019)

130. Development of laundry-work assistance robot by using IoT technology.(Conf 2018)

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Agriculture

131. Secured IoT Based Smart Greenhouse System with Image Inspection.(Conf April 2020)

132. Smart Intrusion Detection System for Crop Protection by using .(Conf Sep 2020)

133. Design and Implementation of an IoT based Automated Agricultural Monitoring and Control System.(Conf 2019)

134. Smart IoT Monitoring System for Agriculture with Predictive Analysis.(Conf 2019)

135. Low Cost and Robust Field-Deployable Environmental Sensor for Smart Agriculture.(Conf 2019)

136. AgriTalk: IoT for Precision Soil Farming of Turmeric Cultivation.(Journ June 2019)

137. Blind Entity Identification for Agricultural IoT Deployments – Raspberry PI Kit (Trans Apr 2019)

138. An overview of internet of things (IOT) and data analytics in Agriculture.(Journ Oct 2018)

Electrical and Smart Grid

139. An IoT-based Sag Monitoring System for Overhead Transmission Lines.(Conf 2019)

140. Charging Automation for Electric Vehicles Is a Smaller Battery Good for the Wireless Charging

141. Electric Vehicles.(Trans Jan 2019)

142. A Smart Home Automation and Metering System using Internet of Things (IoT).(Conf 2019)

143. Automation Of Energy Meter And Building A Network Using IoT.(Conf 2019)

144. Energy Management System Based on Augmented Reality for Human-Computer Interaction in a

145. Smart City.(Conf 2019)

146. Detection of Electricity Theft in Customer Consumption Using Outlier Detection Algorithms.(Conf

147. 2018)

148. High-voltage transmission line inspection robot.(Conf 2018)

149. Experimental battery monitoring system design for electric vehicle applications.(Conf 2018)

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Biomedical

150. Sleep Smart_ Smart Mattress Integrated with e-Textiles and IoT Functions for Sleep Apnea Management.(Conf Aug 2020)

151. [iBlink A Wearable Device Facilitating Facial Paralysis Patients to Blink.(Trans Aug 2019)](#)

152. [Design and Implementation of a Wearable Sensor Network System for IoT-Connected Safety and Health Applications.(Conf 2019)](#)

153. Design and Implementation of Healthcare Assistive Robot.(Conf 2019)

154. Vital Sign Measurement in Telemedicine Rehabilitation Based on Intelligent Wearable Medical Devices.(Access 2019)

155. MEDIBOX — IoT enabled patient assisting device.(Conf 2018)

156. Wireless Wearable Magnetometer-Based Sensor for Sleep Quality Monitoring.(Journ March 2018)

157. A Smart System for Sleep Monitoring by Integrating IoT With Big Data Analytics.(Access 2018)

158. An Approach to develop a smart and intelligent Wheelchair (Conf 2018)

Energy Harvesting

159. Piezoelectric Rainfall Energy Harvester Performance by an Advanced Arduino-Based Measuring System.(Trans Feb 2018)

Automotive

160. A Vehicle Tracking Device with Built-in Safety Features for Public Transportation Systems. (Conf 2019)

161. Design and implementation of a low cost system for vehicle safety and location control. (conf 2018)