



A Unit of Ensemble Tech Pvt Ltd

IEEE Projects in - Embedded Sys | VLSI | DSP | DIP | EIE | MATLAB | Electrical | Android

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About Us :

We at Ingens Tech specialize in academic projects training, guidance and implementation. We offer project guidance and training for final year projects in departments like ECE, EEE, E&I and other associated departments. We have a impeccable track record over more than ten years, during which we have guided thousands of projects in various domains like

- Embedded System Projects
- VLSI Projects
- DSP Projects
- DIP Projects
- MATLAB Projects
- Electrical Projects
- Instrumentation Projects
- Robotics Projects



...and many more related domains. Most of these projects are based on latest international publications like IEEE papers. We hand pick IEEE projects for students to meet their requirements.

About This List :

This projects list is a partial list, taken from our full projects list for the year 2014-15. Most of the projects on the list are based on IEEE base papers for 2014-15. This list is only to give the students a brief idea about the possibilities with a specific technology. We have 100s of other projects in various other domains also. Students can choose either from this list or contact us to get more project options.

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S.No	Code	ELECTRICAL / POWER ELECTRONICS / POWER SYSTEMS / MACHINES
1	IGELE01	Design and implementation of a low cost Distribution Transformer monitoring system for remote electric power grids
2	IGELE02	Improvement of power quality in distributed generation systems using hybrid power filters
3	IGELE03	PLC-based photovoltaic system management for smart home energy management system
4	IGELE04	The Generic Design of a High-Traffic Advanced Metering Infrastructure Using ZigBee
5	IGELE05	Adaptive PID Speed Control Design for Permanent Magnet Synchronous Motor Drives
6	IGELE06	An Isolated Multiport DC-DC Converter for Simultaneous Power Management of Multiple Different Renewable Energy Sources
7	IGELE07	Development of control application using power line communication
8	IGELE08	Advanced metering infrastructure performance using European low-voltage power line communication networks
9	IGELE09	Implementation of Power Measurement System with Fourier Series and Zero-Crossing Algorithm
10	IGELE10	Experimental implementation techniques of P&O MPPT algorithm for PV pumping system
11	IGELE11	A power management strategy for hybrid photovoltaic diesel system with battery storage
12	IGELE12	Modified Incremental Conductance Algorithm for Photovoltaic System Under Partial Shading Conditions and Load Variation
13	IGELE13	Improved Angular Displacement Estimation Based on Hall-Effect Sensors for Driving a Brushless Permanent-Magnet Motor
14	IGELE14	Indoor hospital communication systems: An integrated solution based on power line and visible light communication
15	IGELE15	Gate driver of DC-DC boost converters using national instruments LabVIEW and NImyDAQ
16	IGELE16	Smart Charging Technologies for Portable Electronic Devices
17	IGELE17	High-Order Sliding Mode Block Control of Single-Phase Induction Motor
18	IGELE18	Low-cost I-V tracer for photovoltaic modules and strings

19	IGELE19	Roadmap for smart metering deployment for Indian smart grid
20	IGELE20	Detection and classification of induction motor faults using Motor Current Signature Analysis and Multilayer Perceptron
21	IGELE21	Design and implementation of a low cost Distribution Transformer monitoring system for remote electric power grids
22	IGELE22	Modeling and simulation of a hybrid power generation system of wind turbine, micro-turbine and solar heater cells
23	IGELE23	Speed control of brushless DC motor using intelligent controllers
24	IGELE24	An Underfrequency Load Shedding Scheme for Hybrid and Multiarea Power Systems
25	IGELE25	Application of Advanced Metering Infrastructure in Smart Grids
26	IGELE26	Control of BLDC motor based on adaptive fuzzy logic PID controller
27	IGELE27	Hybrid self — Sustainable green power generation system for powering green data center
28	IGELE28	A new variable step size INC MPPT method for PV systems
29	IGELE29	PLC-based photovoltaic system management for smart home energy management system
30	IGELE30	Intelligent Substation Automation Systems for robust operation of smart grids
31	IGELE31	General Smart Meter Guidelines to Accurately Assess the Aging of Distribution Transformers
32	IGELE32	Performance and control system design for FPGA based CVMPPT boost converter for remote SPV water pumping system applications
33	IGELE33	Migration from RS-485 to EtherCAT for closed loop step motor drive
34	IGELE34	High reliable and deterministic Substation Automation System network based on cobweb architecture
35	IGELE35	Remote monitoring of power frequency electrical signals employing GSM network
36	IGELE36	Reducing the standby power consumption of a home audio system
37	IGELE37	ZigBee based parameters monitoring system for induction motor
38	IGELE38	Solar panel and battery street light monitoring system using GSM wireless communication system

39	IGELE39	Intelligent total sliding-mode control with dead-zone parameter modification for a DC motor driver
40	IGELE40	Using M2M communication for shaving peak of energy demand
41	IGELE41	Motor Temperature Monitoring Based on Impedance Estimation at PWM Frequencies
42	IGELE42	Automated electric meter reading and monitoring system using ZigBee-integrated raspberry Pi single board computer via Modbus
43	IGELE43	Robust predictive control for networked control and application to DC-motor control
44	IGELE44	Application of DSTATCOM for surplus power circulation in MV and LV distribution networks with single-phase distributed energy resources
45	IGELE45	Research on energy-saving control of standby household appliances
46	IGELE46	Remote monitoring of energy consumption using Zigbee and GSM networking
47	IGELE47	Optimal design of a PV/fuel cell hybrid power system for the city of Brest in France
48	IGELE48	System used for Power Quality monitoring in a distribution grid
49	IGELE49	A low cost smart meter network for a smart utility
50	IGELE50	PLC communication in Smart Grid
51	IGELE51	Digital control of MPPT structures for water pumping systems
52	IGELE52	Smooth speed control for low speed high torque permanent magnet synchronous motor using proportional integral resonant controller
53	IGELE53	Maintaining balanced three-phase load voltage during single-phase auto-reclosing in medium voltage distribution lines
54	IGELE54	The design of smart electrical outlet for Smart Home base on power line communication
55	IGELE55	A new MPPT control method of photovoltaic grid-connected inverter system
56	IGELE56	Design of a Brushless DC (BLDC) motor controller
57	IGELE57	Peak power reduction in hybrid energy systems with limited load forecasts
58	IGELE58	Insulator leakage current monitoring: Challenges for high voltage direct current transmission lines
59	IGELE59	Impact of DC voltage control parameters on AC/DC system dynamics under faulted

		conditions
60	IGELE60	ZigBee wireless communication for monitoring renewable street light system
61	IGELE61	Uncertainty in Transmission Line Parameters: Estimation and Impact on Line Current Differential Protection
62	IGELE62	Home energy management systems: Design guidelines for the communication infrastructure
63	IGELE63	Power quality improvement in wind farm connected to grid using STATCOM
64	IGELE64	The modeling and simulation of mine rescue robot with brushless direct current motor based on fuzzy logical controller
65	IGELE65	Speed control of BLDC motor by using PID control and self-tuning fuzzy PID controller
66	IGELE66	A Vision-Based Broken Strand Detection Method for a Power-Line Maintenance Robot
67	IGELE67	One wire PLC system for inter-floor connectivity
68	IGELE68	Application of Wide Area Monitoring Protection and Control in an electricity distribution network
69	IGELE69	Intelligent energy monitoring system based on ZigBee-equipped smart sockets
70	IGELE70	Toward a Secure Wireless-Based Home Area Network for Metering in Smart Grids
71	IGELE71	Improved performance of a sensorless DC motor control using fuzzy logic
72	IGELE72	Closed-loop hybrid direct torque control for medium voltage induction motor drive for performance improvement
73	IGELE73	A novel design of user responsive smart meter integrated automated EMS inn SCADA interfaced smart grid
74	IGELE74	Advanced power window motor using permanent Magnet DC motor
75	IGELE75	A random switching traffic scheduling algorithm in wireless smart grid communication network
76	IGELE76	A human machine interface (HMI) framework for Smart Grid system
77	IGELE77	Overview of smart metering system in Smart Grid scenario
78	IGELE78	Development of power line communication circuit for solar farm monitoring

79	IGELE79	STATCOM control for integration of wind farm to the weak grid
80	IGELE80	Modeling, control and simulation of grid-connected PV system with D-STATCOM
81	IGELE81	Modeling and control of solar/fuel cell powered hybrid power systems
82	IGELE82	A Novel Adaptive P&O MPPT Algorithm Considering Sudden Changes in the Irradiance
83	IGELE83	Faults diagnosis for electrical machines based on analysis of motor current
84	IGELE84	Narrowband Power Line Communications: Enabling the Smart Grid
85	IGELE85	Point-to-point two-level converter system faults analysis
86	IGELE86	Optimal TDMA Scheduling in Tree-Based Power-Line Communication Networks
87	IGELE87	Real time simulation and analysis of maximum power point tracking (MPPT) techniques for solar photo-voltaic system
88	IGELE88	Hybrid low-power Wind Generation and PV gridconnected system with HPC, PC and MPPT control
89	IGELE89	Distributed Voltage Control with Electric Springs: Comparison with STATCOM
90	IGELE90	A GSM based low cost weather monitoring system for solar and wind energy generation
91	IGELE91	Networked-Based Hybrid Distributed Power Sharing and Control for Islanded Microgrid Systems
92	IGELE92	Design of an electrical motor with wide speed range for the in-wheel drive in a heavy duty off-road vehicle
93	IGELE93	Motor Bearing Fault Diagnosis Using Trace Ratio Linear Discriminant Analysis
94	IGELE94	Analysis of Unified Output MPPT Control in Subpanel PV Converter System
95	IGELE95	Improved Method for Direct Black-Box Arc Parameter Determination and Model Validation
96	IGELE96	Improved differential protection scheme for long distance UHVDC transmission line
97	IGELE97	Speed control of stepper motor for collimator jaws positioning based on FPGA implementation
98	IGELE98	Standby power consumption estimation for energy saving service
99	IGELE99	DC/DC Buck Power Converter as a Smooth Starter for a DC Motor Based on a Hierarchical Control

100	IGELE100	A novel approach to wind power grid system with simple MPPT control using MATLAB/Simulink
101	IGELE101	Distribution transformer load management system
102	IGELE102	On-line speed control of the shunt-connected DC motor via a neurocontroller
103	IGELE103	An MIMO Random Channel Generator for Indoor Power-Line Communication
104	IGELE104	Smartphone remote control for home automation applications based on acoustic wake-up receivers
105	IGELE105	Multisensor Wireless System for Eccentricity and Bearing Fault Detection in Induction Motors
106	IGELE106	Regenerative Braking System of Electric Vehicle Driven by Brushless DC Motor
107	IGELE107	PLC-Based PV Plants Smart Monitoring System: Field Measurements and Uncertainty Estimation
108	IGELE108	Sensorless Control of BLDC Motor Drive for an Automotive Fuel Pump Using a Hysteresis Comparator
109	IGELE109	Load-voltage-based single-sensor MPPT controller for multi-channel PV systems
110	IGELE110	Improved brushless DC motor speed controller with digital signal processor
111	IGELE111	FPGA-based implementation of an adaptive P&O MPPT controller for PV applications
112	IGELE112	Fine-grained remote monitoring, control and pre-paid electrical service in rural microgrids
113	IGELE113	An integrated device for optimised power line communication and measurement on smart grids
114	IGELE114	Hydro-PV-wind-battery-diesel based stand-alone hybrid power system
115	IGELE115	Smart home energy management system including renewable energy based on ZigBee and PLC
116	IGELE116	Bearing fault analysis by signal energy calculation based signal processing technique in Squirrel Cage Induction Motor
117	IGELE117	Advanced Motor Monitoring and Diagnostics
118	IGELE118	Smart meter for power factor enhancement in real-time



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119	IGELE119	Renewable energy-fed switched reluctance motor for PV pump applications
120	IGELE120	An interface protection system with power line communication for distributed generators remote control
121	IGELE121	An Event-Driven Approach to the Current Control of a BLDC Motor Using FPGA
122	IGELE122	A Novel Speed Measurement Method for a High-Speed BLDC Motor Based on the Signals From the Rotor Position Sensor
123	IGELE123	Smart Fault Location for Smart Grid Operation Using RTUs and Computational Intelligence Techniques
124	IGELE124	Optimal TDMA Scheduling in Tree-Based Power-Line Communication Networks
125	IGELE125	Implementation of automated demand side energy monitoring on TOD basis using LabVIEW
126	IGELE126	Energy-theft detection issues for advanced metering infrastructure in smart grid
127	IGELE127	Statistical Characterization of the Indoor Low-Voltage Narrowband Power Line Communication Channel
128	IGELE128	The smartphone-enabled DMM
129	IGELE129	Developments in fast load shedding
130	IGELE130	A multifunctional real-time power quality monitoring system using Stockwell transform
131	IGELE131	Flexible street lamp lighting system management through Power Line
132	IGELE132	Power Control and Management in a Hybrid AC/DC Microgrid
133	IGELE133	Systematic experimental evaluation of a novel regenerative braking system on DC motor drive using super-capacitors
134	IGELE134	Remote GSM module monitoring and Photovoltaic system control
135	IGELE135	Architecture of web services interface for a Home Energy Management system
136	IGELE136	A portable hybrid hydrogen fuel cell-battery power unit for wireless sensor network
137	IGELE137	Demand Response Mismatch (DRM): Concept, Impact Analysis, and Solution
138	IGELE138	Hybrid PV/FC stand alone green power generation: A perspective for Indian rural telecommunication systems



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139	IGELE139	Development of smart meter for building energy management system based on the IEEE 1888 standard with Wi-Fi communication
140	IGELE140	Transient stability enhancement of fuel cell system using D-STATCOM
141	IGELE141	An Innovative System Capable to Turn on Any Turned Off electrical appliance by means of an efficient optical energy transfer
142	IGELE142	PLC-Based PV Plants Smart Monitoring System: Field Measurements and Uncertainty Estimation
143	IGELE143	Harnessing wind energy to power sensor networks for agriculture
144	IGELE144	Demonstration of smart charging interface in Green Campus
145	IGELE145	Simulation and emulation of induction motor faults
146	IGELE146	Speed control of BLDC motor using fuzzy logic controller based on sensorless technique
147	IGELE147	A ZigBee controlled lighting system with improved resistance to wireless interference
148	IGELE148	Opportunistic Routing for Smart Grid With Power LineCommunication Access Networks
149	IGELE149	Torque ripple minimization & closed loop speed control of BLDC motor with hysteresis current controller
150	IGELE150	ZigBee based parameters monitoring system for induction motor
151	IGELE151	An energy efficient smart LED lighting system for building energy management
152	IGELE152	Variable Perturbation Size Adaptive P&O MPPT Algorithm for Sudden Changes in Irradiance
153	IGELE153	Ubiquitous networks: Power line communication and Internet of things in smart home environments
154	IGELE154	Design on-line monitoring and sensitive fault detection for three phase induction motor
155	IGELE155	The Design of Motor Drive with Speed Control for an Electric Bicycle
156	IGELE156	Experimental studies and performance evaluation of solar PV powered BLDC motor drive with an integrated MPPT in fan applications
157	IGELE157	Design of an intelligent transformer management system
158	IGELE158	Investigation on power line communication in aircrafts
159	IGELE159	Protection algorithm based on differential voltage measurement for MTDC grids

160	IGELE160	Performance analysis of a power line communication system with multi-carrier DS-CDMA
161	IGELE161	FPGA-based real time incremental conductance maximum power point tracking controller for photovoltaic systems
162	IGELE162	Online Detection of Induction Motor's Stator Winding Short-Circuit Faults
163	IGELE163	Research on DC Line Protection
164	IGELE164	Design of Hybrid Fuzzy-PI controller for speed control of Brushless DC motor
165	IGELE165	Feasibility of a High-Bit-Rate Power-Line Communication Between an Inverter and a Motor
166	IGELE166	Smart home energy management system including renewable energy based on ZigBee and PLC
167	IGELE167	Power sensor applications in a load management network for a residential microgrid
168	IGELE168	P&O MPPT implementation using MATLAB/Simulink
169	IGELE169	New control of PV solar farm as STATCOM (PV-STATCOM) for increasing grid power transmission limits during night and day
170	IGELE170	Diversity Relaying for Parallel Use of Power-Line and Wireless Communication Networks
171	IGELE171	Multipath Modeling of Automotive Power Line Communication Channels
172	IGELE172	An interactive LED lighting interface for high energy savings
173	IGELE173	Fault Location for Transmission Lines Using Wavelet
174	IGELE174	Direct Torque Control of Brushless DC Motor Drives With Improved Reliability
175	IGELE175	Communication networks and non-technical energy loss control system for smart grid networks
176	IGELE176	Global fan speed control considering non-ideal temperature measurements in enterprise servers
177	IGELE177	WSN-Based Smart Sensors and Actuator for Power Management in Intelligent Buildings
178	IGELE178	An approach for power system fault diagnosis using current samples towards smart grid operation
179	IGELE179	Adaptive PI Control of STATCOM for Voltage Regulation
180	IGELE180	Zigbee-based intelligent street lighting system



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181	IGELE181	Classification of fault analysis of HVDC systems using artificial neural network
182	IGELE182	Natural Frequency-Based Line Fault Location in HVDC Lines
183	IGELE183	Design and Application of ZigBee Wireless Techniques for an Intelligent House Lighting Control System
184	IGELE184	Applicability of narrowband power line communication in an LVDC distribution network
185	IGELE185	Advanced metering infrastructure performance using European low-voltage power line communication networks