About Schneider Electric

Schneider's purpose is to **empower all to make the most of our energy and resources, bridging progress and sustainability** for all. We call this **Life Is On**.

Our mission is to be your **digital partner for Sustainability and Efficiency**.

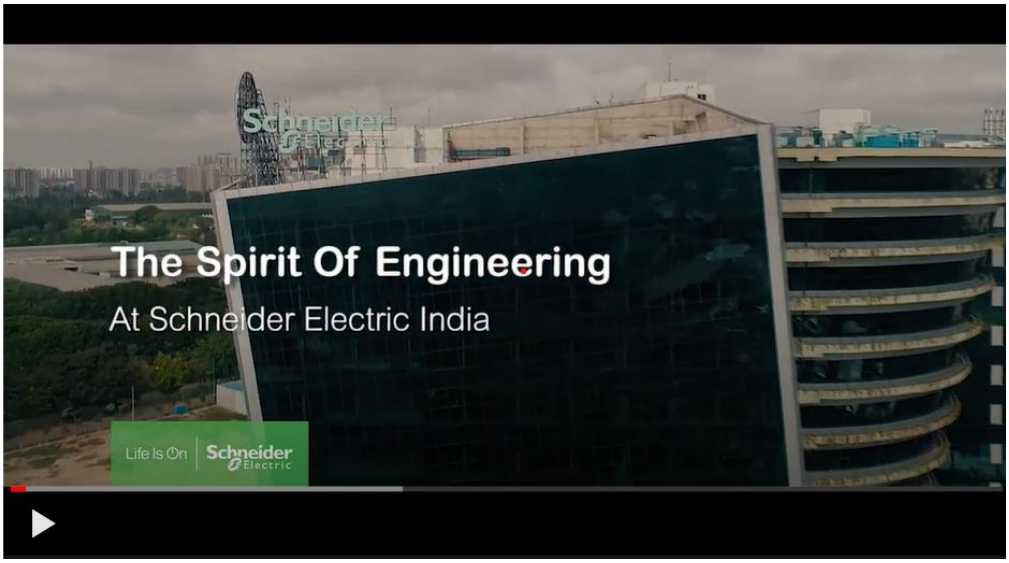
We drive digital transformation by integrating world-leading process and energy technologies, end-point to cloud connecting products, controls, software and services, across the entire lifecycle, enabling integrated company management, for homes, buildings, data centers, infrastructure, and industries.

We are the **most local of global companies**. We are advocates of open standards and partnership ecosystems that are passionate about our shared **Meaningful Purpose, Inclusive and Empowered** values.

www.se.com

Know more about our R&D Centre by clicking this picture or clicking this link

https://www.youtube.com/watch?app=desktop&v=GbzZ_PTkVLs

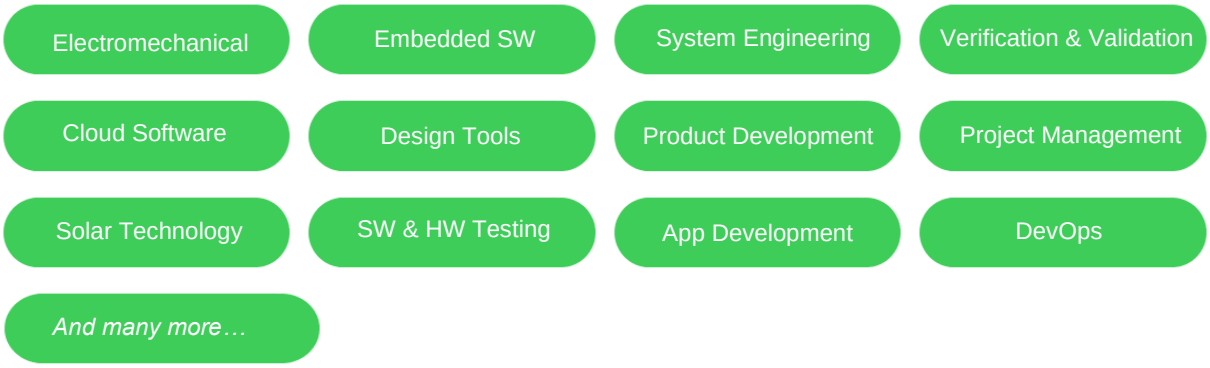


About Schneider Electric, R&D

Established in 2002, our India R&D Centre is the 2nd largest of its kind in the Schneider world after France. Here, highly qualified cross functional technical teams work on bringing our products to life, across all phases of the Product Development cycle. This helps us realize our purpose of: providing energy and automation digital solutions for efficiency and sustainability. We combine world-leading energy technologies, real-time automation, software and services into integrated solutions for Homes, Buildings, Data Centers, Infrastructure and Industries.

At Schneider Electric, we believe **access to energy and digital** is a basic human right. We empower all to **make the most of their energy and resources**, ensuring Life Is On everywhere, for everyone, at every moment.

A glimpse into the Competency Spread of R&D:



Important Information about the Schneider Electric University Program

Compensation:

- **INR 9,00,000** p.a. for B. Techs for a Full-Time Role **(TTC: 7.5 lakhs + 1.5 Lakhs of Deferred Bonus after competing 12 months with SE) +** 1.5 lakhs when the student completes 24 months
- **INR 9,50,000** p.a. for M. Techs for a Full-Time Role **(TTC: 8 lakhs + 1.5 Lakhs of Deferred Bonus after competing 12 months with SE) +** 1.5 lakhs when the student completes 24 months
- Stipend: **INR 25,000** per month (might be increased) for Internship Roles
- There is **No Service Agreement clause** for any Full Time Hires at Schneider Electric
- Job Location: **Bengaluru, Hyderabad** (for IRC)
- The **Probationary Period** for University Hires is **6 months**.
- This is **an Indicative Job Description** (JD) about our R&D division. We request all the students to go through the same. The students should also be flexible and open to work in any of these Sub Departments if selected Internship or a Full - Time Role

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Sl. No.	Business Unit	Domain	Title of Position	Job Description
1	INDUSTRIAL AUTOMATION	DP PAC R&D	· GET - SOFTWARE DEVELOPMENT ENGINEER	• Assist with the analysis, design and development, testing and documentation of new software solutions • Development and configuration of new software as required by the company. • Development of improvements to our existing solutions as required by the company • Be part of a team of software developers building industry leading, robust and innovative software solutions that are fit for purpose. • Utilize the department development infrastructure, development processes and software programing techniques and provide feedback as appropriate
2	INDUSTRIAL AUTOMATION	INNOVATION & TECHNOLOGY	· I&T GET / MET	• Be part of a team of software developers building industry leading, robust and innovative software solutions that are fit for purpose. • Utilize the department development infrastructure, development processes and software programing techniques and provide feedback as appropriate • Assist with the analysis, design and development, testing and documentation of new software solutions • Development and configuration of new software as required by the company. • Development of improvements to our existing solutions as required by the company.
3	INDUSTRIAL AUTOMATION	INDIA RESEARCH CENTRE (IRC)	· GET: EMBEDDED (FW / HW) ENGINEER	• Good understanding of Assembly and C programming , Operating Systems fundamentals is must. • Understanding of Real Time Operating Systems is added advantage but not mandatory • Design and develop embedded firmware for microcontroller based industrial control system. • Define and implement high performance software by leveraging the understanding of embedded hardware • Digital and Analog Hardware design, hardware simulation and verification
4	INDUSTRIAL AUTOMATION	INDIA RESEARCH CENTRE (IRC) is located at Hyderabad, Telangana, and is responsible for research and development of various product lines of Process Automation division of our Industry Business	GET: APPLICATION SOFTWARE ENGINEER	• Design and develop application software for industrial control system • Define and implement high performance software by leveraging the understanding of the control system and process automation know how • Good understanding of C# / .Net / JAVA and Operating Systems fundamentals and Design patterns is must. • Nice to have: an understanding of Web programing using Service Oriented Architecture • Our team works on various cutting-edge technologies under diversified areas such as hardware development, firmware development, and application software development for Process Automation solutions
5	GLOBAL TECHNOLOGY	LVCS – ENERGY MANAGEMENT	· GET: EMBEDDED FW & HW	• Strong knowledge on the embedded programming, Digital and Analog electronics • Firmware development by using Embedded language such as C, C++ • Programming and interfacing microcontroller peripherals like timers, UART, ADC, DAC, IO, sensors and actuators. Memory Interfacing Techniques. • Design and development on 16/32 bit microcontrollers (ARM, coldfire, PowerPC.), RTOS (VxWorks, threadx, Embos..), usage of IDE, toolchain, debuggers. • Knowledge on basic protocols like CAN, SPI and I2C etc
6	GLOBAL TECHNOLOGY	DIGITAL ENGINEERING – ENERGY MANAGEMENT	· GET: EMBEDDED FW & HW .	• Knowledge on embedded systems and its working • Good knowledge on Electronics and Embedded Firmware/Software • Design/Development and life cycle management of embedded product, components in both Electronics and Firmware. • Knowledge of interfaces like UART, USB, SPI, CAN and Memory • Knowledge of Integrated development IDEs like Keil and Electronics simulation tools

7	GLOBAL TECHNOLOGY	DIGITAL ENGINEERING – ENERGY MANAGEMENT	· · GET - CLOUD ANALYTICS SOFTWARE	• Understanding IoT based Application Architecture • Exposure to Cloud Applications • Good knowledge of SQL/NoSQL • Strong knowledge on the front end /back end programming • Strong understanding about Software fundamentals (Data structure, OOPS, Operating systems, Database & Algorithm analysis) • Well aware of various Communication Protocols (TCP/IP, HTTP/S) • Strong knowledge on high level languages like C, C++, C#, Java, JS, TS
8	GLOBAL TECHNOLOGY	DIGITAL ENGINEERING – ENERGY MANAGEMENT	GET - MOBILE SOFTWARE	• Native/ Hybrid Mobile App Development (Android /iOS) • Strong knowledge on high level languages like C#, Java, Objective C, Swift, Kotlin • Mobile Software development by using latest technologies • Understanding IoT based Application Architecture and Cyber Security fundamentals
9	GLOBAL TECHNOLOGY	VERIFICATION & VALIDATION	· GET: VERIFICATION AND VALIDATION – ENERGY MANAGEMENT	• Execute Electrical and Electronic product testing for switchgear products in Schneider electric lab as per IEC/IS standards or internal specification. • Work on Innovation in product development and validate the same. • Writing down the test plan prepare the different jigs, fixtures and test benches, generate report and take decisions on product development activities. • Perform Root cause analysis for the product failures and suggest the improvement plan. • Execute EMC/EMI and Radio frequency testing of electronic product as per international standards
10	GLOBAL TECHNOLOGY	VERIFICATION & VALIDATION	· GET: VERIFICATION AND VALIDATION – ENERGY MANAGEMENT	• Coding and executing automated test cases activities using python, selenium and Java scripting. • Robot framework for various Desktop, Web and mobile applications. • Passion to work on Electrical Switchgear protection and its communications. • Passion to work on SCADA systems. • Perform basic level of cybersecurity tests like Vulnerability checks. • Perform Data analytics for predictive result by applying AI/ML on the test data's
11	GLOBAL TECHNOLOGY	ESS	· GET / MET	• Basic Knowledge of FEA, CFD, Creo, AutoCAD,ANSYS Workbench and Fluent • The candidate needs to develop a strong knowledge on Schneider enclosure products and need to support the team on critical issues • Need to organize the project review and manage the project deliverables of his own and teams. • The candidate needs to connect and collaborate with lab and design team very closely to validate the calculation done by him/her. • Will need to travel to the plant to understand products/assemblies on need basis
12	SECURE POWER	TRANSACTION & EDGE (T&E)	· GET – FIRMWARE	• Work on Analog/Digital electronics fundamentals. • Work on Microprocessors/Controllers and peripherals. • Work on programming languages like C, C++ etc.
13	SECURE POWER	TRANSACTION & EDGE (T&E)	· GET – SAFETY	• Verify of Safety Label and Art-Work to ensure as per safety standards and SE corporate guidelines • Test SE Secure Power products in accordance with Test Request and Test Data Sheets in Box folder. • Ensure and support all the Energy Star activities in line with ISO 17025 standard. • Create all quality related documents (Equipment Master List, Consumable Equipment Master List, MU, Laboratory power quality, Laboratory Ambient, voltage, frequency, THD Monitoring etc) • Prepare critical components list and verify components approval as per product safety standards.
14	SECURE POWER	TRANSACTION & EDGE (T&E)	· · MET – ELECTRICAL ·	• Design of semiconductors, Magnetics (transformer, Inductors) for various power converter topologies. • Estimation of power losses, other electrical and thermal stress using deisgn calculation spreadsheets.

				• Support design of Analog, Digital circuits for control, monitoring, communication purpose. • Carry out Engineering proto-bench development activities at sub-system & system integration level to mature the product design. • Support Embedded f/w development for control, monitoring and communication purpose. • Carry out root cause analysis. Ability to identify the root cause of design failure and able to come up with corrective action. • Support DVT (Design Verification Testing) and EMI/EMC development activities
15	SECURE POWER	TRANSACTION & EDGE (T&E)	· MET - MECHANICAL	• Understanding of and working with Internal general arrangement of Electronics and Electrical components like – PCBs, Devices, heat sink, cables & connectors, sockets, earthing routing, transformers, capacitors and inductors, fans etc • Understanding of and working on thermal engineering concepts – air flow management through heat dissipation removal techniques, maintaining desired thermal level in the encloser for optimum performance and avoidance of any derating etc. • Understanding of and working on Brand Design, agronomy concepts, serviceability and replacement modularity, aesthetics for enclosers. • Designing for cost and design for manufacturing. • Working on mechanical & electrical safety standards while design, IP protection class, leakage current and charge proof design, shock proof mechanical design.
16	SECURE POWER	CHIEF TECHNOLOGY OFFICE (CTO)	· GET – SOFTWARE DEVELOPMENT	• Assist with the analysis, design and development, testing and documentation of new software solutions • Development of improvements to our existing solutions as required by the company. • Configure software development tools as required by the company. • Exposure to Object oriented programming • Assist in the estimation of tasks, identify possible obstacles and propose appropriate solutions. • Follow company software data processing and security guidelines in developing software.

17	SECURE POWER	CHIEF TECHNOLOGY OFFICE (CTO)	GET – QUALITY ASSURANCE	• Perform some or all the test life cycle activities, in agile, iterative or waterfall model based SDLC.
				  ○ Analyze requirements
				  ○ Provide inputs to test strategy / test plan
				  ○ Design test cases
				  ○ Perform manual and automated test execution.
				  ○ Perform release & closure activities.
				• Strive for continuous automation to reduce test life cycle time.
				• Acquire the domain & product knowledge and strive for innovation at every level.
				• Nice to have: - ISTQB foundation level certified

18	POWER SYSTEMS	EPE	· GET – ELECTRO MECHANICAL	• Strong on knowledge on basics Mechanical/Electricals subjects and products • independently generate concept design as per functional condition needs/specification considering Medium Voltage environment. • Create the concept design, develop the detail design, carry out the electrical and mechanical calculation, involve in prototype development, testing and product launch • Understand the mechanical & electrical standards and implement the same in the product design • Upgrade and Optimize existing technology and redesign to cost in switchgear products
19	DIGITAL CUSTOMER EXPERIENCE SOFTWARE (DCES)	DCES	· GET – SOFTWARE DEVELOPMENT	• Has good understanding of the OOPS, Data structure, Algorithm, at least one front end or backend programming language (eg. C#, Java, Python, Javascript, Typescript etc) and at least one RDBMS databases (E.g SQL Server, MYSQL etc) or NOSQL databases (MongoDB, Elastic Search, SOLR, Cassandra etc) • Basic Knowledge/awareness on technologies like Artificial Intelligence/Machine Learning/Deep learning/ Virtual Reality/ Mixed Reality/ Augmented Reality • Plays an instrumental role in the full development lifecycle of the solution including design, code development, code review, testing, deployment and post deployment support

				• Practices solid software engineering disciplines (e.g. Behavior driven development (BDD) Test driven development (TDD), Code refactoring, Continuous code integration, delivery & deployment etc.)
20	DIGITAL ENERGY	DIGITAL POWER	· MET/GET – DESIGN AND DEVELOPMENT – SOFTWARE ·	• Strong knowledge on the Operating Systems with exposure in Windows, Linux or Unix • Understanding and exposure of both Client side and server application development concepts • Software development of Software components of Enterprise Energy Managements Software Systems by using ○ Languages like C++, C#.NET & Java on different Operating Systems. ○ AngularJS, Type Script, Electron, REST, Signal R, Rebus, Web API, MVC, .Net Core, C#.NET • Exposure to software development either with Windows Full Stack development or Mean stack development.
21	DIGITAL ENERGY	DIGITAL POWER	MET/GET – DESIGN AND DEVELOPMENT – FIRMWARE	• Firmware development by using Embedded language such as C, C++, Java • Programming and interfacing microcontroller peripherals like timers, UART, ADC, DAC, IO, sensors and actuators. Memory Interfacing Techniques. • Signal processing: Audio, Video with DSP controllers • Design and development on 16/32 bit microcontrollers (ARM, coldfire, PowerPC.), RTOS (VxWorks, threadx, Embos..) And usage of IDE, toolchain, debuggers. • Knowledge on basic protocols like CAN, SPI and I2C, etc and Embedded Operating Systems (like RTOS & Linux)
22	DIGITAL ENERGY	DIGITAL POWER	GET – ELECTRICAL ENGINEERING	• Design and development of electrical switchgear particularly low voltage enclosures • Create the concept design, develop the detail design, carry out the electrical and mechanical calculation, involve in prototype, testing and product launch • Understand the electrical standards and implement the same in the product design • Awareness of switch gear products and their applications particularly in Low Voltage domain • Manage the product lifecycle by Schneider Electric continuous engineering activity
23	SECURE POWER	TRANSACTION & EDGE (T&E)	· GET - CUSTOMER SATISFACTION & QUALITY (CS&Q)	• Perform Root cause analysis of the failed products received from customer sites and understand the cause of failure of UPS product / circuit board / component. • Ensure timely support to the customers / quality teams within and outside the country by providing the product failure Analysis reports. • Resolution of quality issues on the products in coordination with Field Services, Sustenance engineering & manufacturing plants. • Work on Continuous improvement projects in coordination with Engineering & manufacturing plants to reduce the Warranty cost & reduce the Field failures. • Assist in preparation of Quality dashboards for the assigned products for Management reporting
24	POWER PRODUCTS	ELECTRA APAC HUB	· MET – SOLUTION ARCHITECT	• Engage high level discussions with customers to capture expressed and unexpressed requirements • Convert those requirements in power systems architectures magnifying Schneider Electric catalogue strengths. • Support customers with high level expertise in power systems simulations, protection plan (MV/LV), power automation and monitoring, Digital Cloud based control. • Contribute to the definition of optimized and competitive MV/LV power systems architecture based on Schneider Electric catalogue • Build appropriate reference architectures, technical materials, and documentations to promote our solutions emphasizing on differentiation and customer benefits. • Knowledge of devices to cloud architecture (protocol, software, architecture)
25	POWER PRODUCTS	IND E&I	· GET	• Hands on experience in 3D modelling software (Creo, Solid works… etc) • The candidate needs to develop a strong knowledge on Schneider enclosure, breaker products and need to support the team on critical issues • Need to organize the project review and manage the project deliverables of his own and teams.

				• The resource needs to connect and collaborate with lab and design team very closely to validate the calculation done by him. • Will need to travel to the plant to understand products/assemblies on need basis
26	DIGITAL POWER	ENERGY MANAGEMENT	· INTERN – FIRMWARE DEVELOPMENT/ HARDWARE DEVELOPMENT	• Perform some or all the firmware development activities, in agile, iterative or waterfall model. o Analyze requirements o Design the logic / flow o Create test strategy / test plan o Perform manual / automated test o Perform release and closure activities • Implement best practices like simulations, coding guidelines and documentation. • Acquire the domain & product knowledge and strive for innovation at every level
27	DIGITAL POWER	ENERGY MANAGEMENT	GET	• Support for the timely deliveries of the Project without compromise on the KPI & Quality Goals. • Be a technology and process expert, driving development and test, test fixture design and test automation for a software system that includes a website, real-time services running on redundant servers, as well as connected devices like electrical meters Support for design and development of new features in the project. • Analyse and provide right solutions/fixes for the existing issues or defects in the project. • Should have very good knowledge in couple of these C, C++, HTML5, Java script (js), Type script (ts), REST API and its usage etc • Should have good knowledge in XML, JSON and different parsing libraries • Should have good knowledge in HTTP and HTTPS communications • Should have good understanding in ASP.NET MVC
28	REVIT ELECTRICAL	ENERGY MANAGEMENT	· INTERN – SOFTWARE ENGINEER	• Work very closely with the other business verticals like DevOps, QA, product management, customer support etc. • Your primary responsibility will be to contribute to design, development and testing as part of the product development. • This role will involve development, unit and workflow testing of new features, maintenance of shipped functionality, documentation of engineering practices, resolving customer issues, managing defects, developing and management of automated tests. • Should be proficient in C#, WPF, XAML, MVVM, WCF, SQL Server, ASP.NET, JavaScript, angular, stencil js, Azure cloud, Azure DevOps, JIRA etc
29	INDUSTRY	INCUBATOR	· INTERN – INS & ECE ENGG	• Understand Agile process and participate in daily scrum • Work actively on assigned task with providing estimate to complete the task • Propose new ideas and technologies to overall design and POC end result • Good to have knowledge on doing simulation using MATLAB • Good to have knowledge of 61131 languages and prefer to know 61499.
30	INDUSTRY	INCUBATOR	INTERN – CS & ECE ENGG	• Understand Agile process and participate in daily scrum • Work actively on assigned task with providing estimate to complete the task • Propose new ideas and technologies to overall design and POC end result • Worked and knowledge of Web technologies like AngularJs/ReactJs/MongoDb • Good to have knowledge of .Net (C#, CLR, Assemblies, Roslyn)
31	DIGITAL ENERGY	ENERGY MANAGEMENT	Intern – Data analytics on Customer Satisfaction	• Build Analytical dashboard for Customer support • Build Analytical dashboard for Preventive Customer Issue resolution • Build Analytical dashboard for Customer impact on open issues • Exposure to topic of Data science / analytics • Ability to work in Tableau / Power BI and build dashboards
32	DIGITAL ENERGY	ENERGY MANAGEMENT	Intern – Automated customer test set up	• Understand customer use case for our SW / Systems (Working on IoT) • Create Test bench architecture (with connected device, IoT Gateway & Cloud SW) • Prepare Automation Script (Python, Selenium, Robot Framework, Labview etc) • Good Skills in Automation SW's (Python, Selenium, Robot Framework, Labview, Appium etc) • Good awareness and understanding on Connected Electronic Devices, IoT Gateways & Cloud SW's

33	DIGITAL POWER	POWER QUALITY	INTERN – TECHNOLOGICAL DISRUPTION ANALYST	• Engage high level discussions with internal ,external stake holders and cross BU experts about the way they are looking at the way disruption happens in electrical world and how it would impact the nature of loads and the way it is treated now • Detailed technical study on Harmonics generating loads in present network and how the disruptive technologies would change the nature of these loads • Timeline assumptions on these disruptions by engaging with the experts in internal (Schneider) and external experts in the market/technology. • Detailed study on impact in Power Quality with EV, need of PQ in Micro Grids, and how any new disruption, lets say DC bus would change the way green field projects are treated now. • Build appropriate reference architectures, technical materials, and documentations to prove the assumptions and make a summary project report and present it to the Digital Power leadership team. • Knowledge of devices to cloud architecture (protocol, software, architecture)
34	R&D	DEVS	GET	• Work closely with the product owners, UX designers, architects and engineering team to ensure our solutions meet the functional, performance and scalability needs of the platform, consuming applications and our customers • Evaluate product requirements for operational feasibility • Design and implement robust, highly reliable, scalable and secure application • Write clean, efficient, high quality, secure, testable, maintainable code based on specifications. • Comply with project plans, coding standards and industry standard
35	R&D	DEVS	GET – DIGITAL SYSTEMS : SYSTEM ENGINEERING	• Define the System level specification as per the customer use case and architecture defined. • Support product development team during the implementation • Basic knowledge of cybersecurity tests like Vulnerability checks. • Knowledge on Model Based System Engineering & SysML. • Knowledge on Communication Protocols – Modbus Serial/TCP/ Zigbee/ Bluetooth/61850.
36	R&D	DEVS	GET - DIGITAL SYSTEMS : SYSTEM VERIFICATION	• Developing Test strategy, Test Plan & Test cases and creating Test reports • Developing & Execution of the Automation scripts increasing the efficiency in execution. • Perform Functional, Performance, User experience Verification • Knowledge on the software development life cycle. • Knowledge on Python, Selenium, Appium and Java scripting. • Robot framework for various Desktop, Web and mobile applications
37	R&D	DEVS	GET – SYSTEMS & TEST	• Willing to take up a challenging role in an Global product R&D team, within Schneider Electric for LV products, Automation in Labs covering multiple technologies, domains and applications. • The project portfolio includes new Product inventions, Automation, Data analytics , Product / technology verification expertise . • Ability to troubleshoot and think out of the box. • High-level technical writing skills.
38	R&D	Devs/Embedded Edge	GET	• Good Knowledge of Electronics, Digital concepts,Embedded Systems, RTOS . • Interest to work in Embedded Software/Firmware Development with C/C++ or Java. • Technolgies in Digital including wired and wireless(BLE, ZigBee, WiFI, LTEM) • Good Knowledge of Programming with C++, Java Script/Python/Ruby • Having attitude work on application UI/UX or CI/CD and autmation
39	R&D	Devs/Embedded Edge	Intern	• Work as full time intern in our office in Bangalore for 6 months in 8th Sem • Good Knowledge of Electronics, Digital concepts, Embedded Systems, RTOS . • Interest to work in Embedded Software Development with C/C++ or Java. • Technolgies in Digital including wired and wireless(BLE, ZigBee, WiFI, LTEM)

				• Good Knowledge computer programming with strong intent to work in automation or web application development
40	R&D	DCS	POWER ELECTRONICS ENGINEER	• Work closely with global and local product management to define and design/redesign of power electronic components used in Schneider Electric Enterprise 3 Phase UPS products based upon customer feedback/ requests related to quality improvements or enhancements on existing products • Designs/develops new products and power electronic components in a specialty • Conduct and participate in Root Cause Analysis, Brainstorming solutions/suggestions, Validation and verification of solutions until implementation • Validates design by carrying out tests, production of prototypes • Proficiency in Design, development and field failure analysis of 3 Phase high power UPS technologies, DC-DC converter technologies, AC-DC converter technologies, and harmonic filtering.
41	R&D	DCS	ELECTRICAL DESIGN ENGINEER	• Provide product application engineering support through right configuration selection, identifying & highlighting any application issues, providing solution for customized product application requirement, etc. • Understand products through design, specification, applicable standards, configuration, application, operations, management, drawings, etc to provide fast and accurate response to field sales teams in support of customer queries. • Create engineering design details, specs, drawings, installation instructions, operation. • Participate in new product development process to make sure that the product by following PMP/ PEP process.\ • Understand UPS products through design, specification, applicable standards, configuration, application, operations etc to provide fast and accurate response to field service/sales teams/LOB design leads in support of field failed parts analysis/Service or Sales queries.