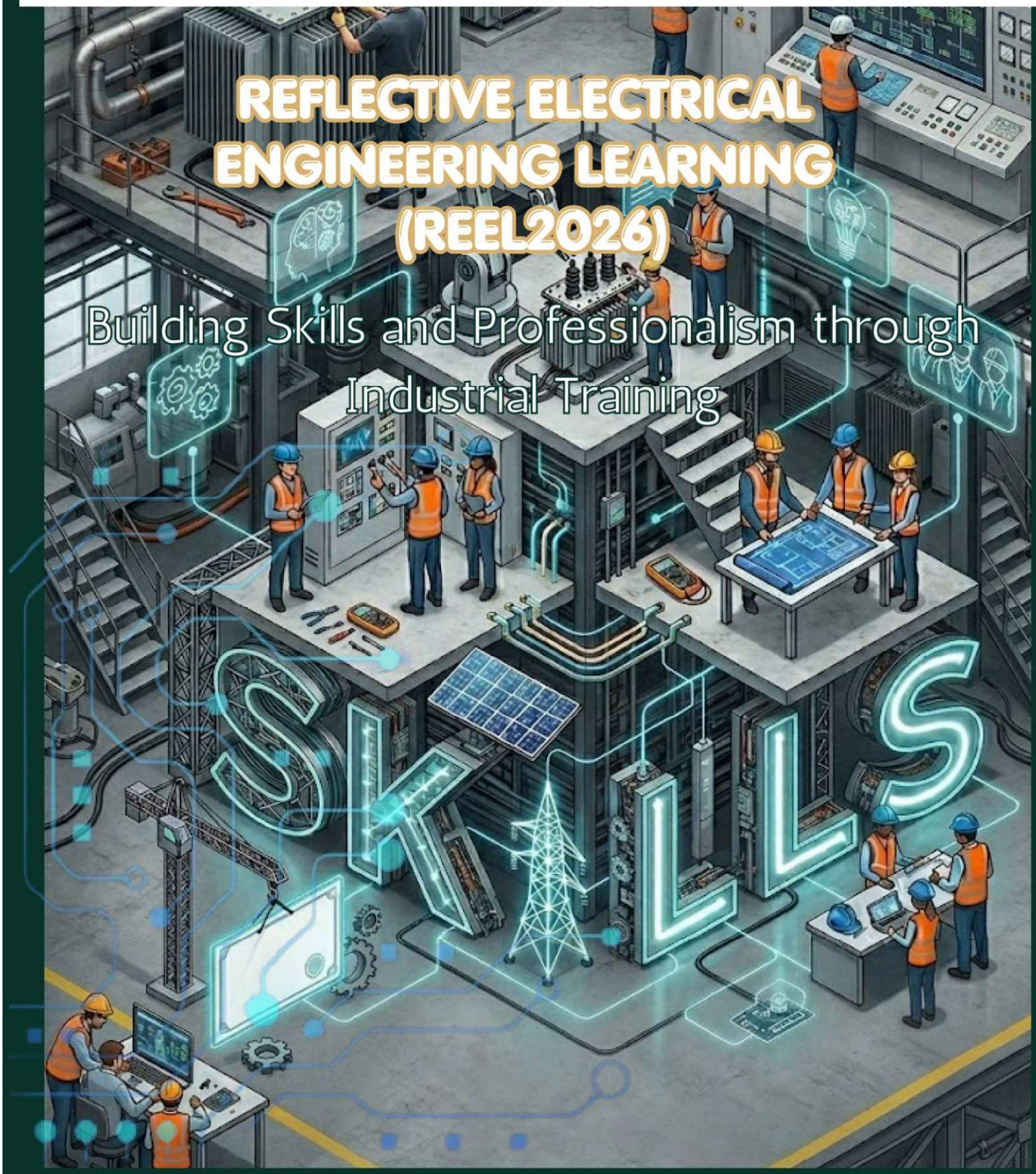
REFLECTIVE ELECTRICAL ENGINEERING LEARNING (REEL2026)

Building Skills and Professionalism through Industrial Training



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A Journey of Growth: Experiences at AMC Cincaria

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Real-world experience and practical engineering skills development for students can be gained through the industrial training platform. I had the opportunity to undergo industrial training at AMC Cincaria Sdn Bhd and was involved in several technical activities related to PCB assembly and testing. Among the skills I gained were PCB testing, troubleshooting and measuring solder usage along with manual soldering technique. This allowed me to improve my practical skills, problem-solving abilities and gain a better understanding of quality control and professionalism in the workplace.

Among the tasks I had to do during my industrial training was to test PCBs using a test machine, to ensure that the circuit was working properly. At first, I found it very challenging because I didn't know how to operate the equipment and understood the test procedures. However, with the help and guidance from my supervisor, I managed to connect the PCB correctly to the test socket and operate the machine.

The PCB test results will be identified by a light signal on the machine. The test result is successful when the green light is on, and this indicates that the PCB is working properly. Further inspection needs to be carried out if the test result is unsuccessful. The Quality Assurance Department will send the defective and non-functional PCB boards to my department, and I must carefully inspect the PCB to identify issues such as poor solder joints, missing components or misalignment. This process is very challenging because it is quite difficult to identify defects. This is because the defects are very small and difficult to detect. This experience taught me how to solve problems step by step and think critically once the cause of the defect is identified. It also made me realize that quality control is very important to ensure the quality of the products produced.

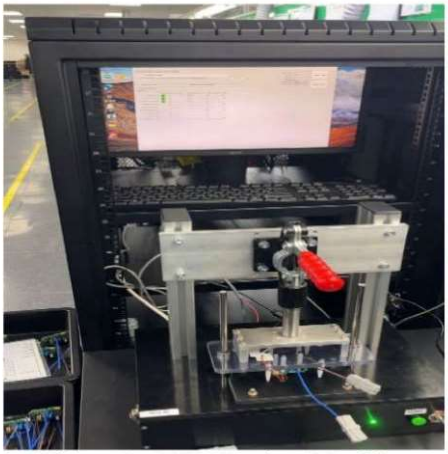


Figure 1: PCB Testing Machine

Additionally, measuring solder usage during the PCB assembly process is an important task that I must do. I use a digital scale to measure the weight of solder wire before and after use to determine the amount of solder used. Through this assignment, I can manually solder components to PCB. This is a very valuable practical experience as it teaches me to use proper soldering techniques and understand how good solder joints are formed. I also learned to carefully control the amount of solder and ensure that each joint is clean and properly installed. At first, maintaining consistency in soldering was quite difficult for me because defects can occur when there is too much or too little solder. As a result of continuous training and guidance, I have been able to improve my techniques and skills and my confidence has increased. The measurement data obtained needs to be collected and the values recorded by Microsoft Excel to calculate the average solder's usage. This process can help me understand how data is used in manufacturing to monitor material usage and improve efficiency. Overall, this assignment not only improved my practical soldering skills but also increased my understanding of data analysis and its importance in engineering work.



Figure 2: Assisted in soldering and calculated solder usage

I gained a lot of technical and soft skills through this industrial training. I had the opportunity to learn how to analyze problems and data from PCB testing and soldering. Through soft skills, I learned the importance of being responsible for the tasks given and following all instructions carefully at work. In addition, I also realized the importance of good communication between supervisors and colleagues because it can ensure that all tasks can be carried out correctly and accurately. The need to comply with safety procedures and maintain a clean working environment at work is also very important in the industrial sector, especially in the electronics industry. Through this experience, I was able to build confidence and prepare myself to work in a professional field in the future.

In conclusion, my industrial training at AMC Cincaria Sdn. Bhd. taught me a lot and provided valuable exposure to engineering practices. Through my experience in PCB testing and soldering, my technical knowledge and practical skills have been enhanced. In addition, my confidence in handling engineering tasks, professionalism and problem-solving abilities have been developed through this industrial training. This experience can benefit my future career, especially in the electronics field.

Authors' Biography



Muhammad Izwannizam bin Rossidan is a Diploma in Electrical & Electronic Engineering student at Universiti Teknologi MARA (UiTM) Cawangan Pulau Pinang. He is currently undergoing his industrial training at AMC Cincaria Sdn. Bhd. From March to June 2026, where he is actively in PCN assembly, testing, troubleshooting, and soldering process. Through this hands-on experience, he has developed practical technical skills and gained exposure to real industrial working environments. He is particularly interested in electronic manufacturing and aims to further enhance his knowledge and skills to become a competent and professional engineer in the future.



Shahilah binti Nordin has 23 years of experience in electrical engineering field since she joined Universiti Teknologi MARA, Pulau Pinang in 2003. She received Bachelor of Engineering (Hons) (Electrical, Electronics and Systems) from Universiti Kebangsaan Malaysia, UKM in 1998 and was appointed as lecturer in Uniti College for 5 years. In 2000, she received Master of Engineering (Communication and System) from Universiti Kebangsaan Malaysia, UKM.

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