

## PROJECT TITLE

Ghost Current HuntEr

## MEMBERS

Lee Huang Xiang, Ryan (*Group Leader*)

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## COURSE

Higher Nitec in Security System Integration

## COLLEGE

ITE College West

**ITE**  
**LEE KUAN YEW**  
Technology  
Award



## PHANTOM POWER HUNT

The Ghost Current HuntEr project focuses on addressing safety and efficiency concerns related to ghost currents in electronic systems. These hidden electrical currents can cause power losses, equipment damage, and other hazards. The team aimed to create a reliable and affordable ghost current detection system that works with an Internet-of-Things (IoT) cloud platform for real-time monitoring and sends customisable email alerts to stakeholders promptly.

To enhance electrical safety and encourage energy efficiency, the team developed an advanced ghost current detector for various environments. The solution includes precise current sensors, IoT integration for data transmission, and an email notification system for quick alerts. It offers benefits like real-time monitoring, cost savings, and improved safety. The team faced various challenges in the project, such as managing costs, optimising the system for efficiency, deploying sensors safely, and considering sustainability factors. With the Ghost Current HuntEr, the students have created a complete solution for detecting and managing ghost currents while promoting energy conservation.

## INNOVATORS' INSPIRATION

*"My friends and I saw computers left switched on in the school laboratories, while no one was using them. We felt it was waste of electricity and wanted to do something about it. We embarked on a mission to create a ghost current detection device, driven by our passion for conserving energy. Despite facing numerous challenges and having to refine our device multiple times, the thrill of success was unparalleled. Today, the Ghost Current HuntEr is deployed in over 20 computer laboratories in ITE College West and we are so proud to have made a difference."*

- Lee Huang Xiang, Ryan

## WHAT'S SO SPECIAL

- The device integrates cutting-edge current detection technology with IoT cloud connectivity, making it different from other ghost current detection devices.
- It is designed to be scalable, allowing for easy integration into various electrical systems. The team aims to make ghost current detection technology accessible to a wide range of users.
- The team prioritised user experience by using intuitive design features that make installation and operation user-friendly. The device also incorporates sustainable practices in its design and implementation.
- The project emphasises on continuous improvement through feedback mechanisms and updates to enhance performance and efficiency.
- The team consulted industry experts to ensure the solution meets the evolving needs and standards of the electrical sector.