**Smart Clothings Using LED lightings and other Smart Devices**
*(Project Code: J55a-I2)*

**Students:**
- LIN Sau Ping
- WONG Tsz Yan
- WONG Kin Ham

**Project Supervisor:**
- Prof. She, James

---

**Introduction**

Over the years, more and more projects on LEDs and lights have come up. There exist a number of LED fashions. The majority are merely for aesthetic purpose though. Good smart clothing should not only be fashionable, but also be functional. Therefore, in this project, a new product is designed and made to satisfy future lifestyle and consumer needs.

**Aim and Objectives**

- Make people look more beautiful or stylish by combining fashion with technology
- Build a piece of clothing with an LED system, which is able to communicate with a smartphone
- Functions of the smart clothing include: showing special patterns and phrases, reacting to different social occasions, giving notifications, etc.

---

**Methodology**

1. **8 x 8 RGB LED Matrix**
2. **Microcontroller Unit (Arduino Uno)**
3. **C++ Programming**
4. **Computer**
5. **Human Wearsers**
6. **Bluetooth Module**
7. **Smartphone (Android OS)**
8. **Java Programming**
9. **Apparel (Jacket, bag, hat, etc)**
10. **Android phone**

The whole setup of the smart clothing

---

**Results**

- **Weavers can choose or even design their desirable lighting patterns. This makes the smart clothing more personalised.**
  - The smart clothing can be used as a social tool.
  - The smart clothing is functional. LED notification for email and SMS is an example.
  - The work is user and environmental friendly. The LED system is entirely detachable from garments
    - Laundry is possible
    - Weavers can pair the LEDs with any piece of clothes or accessories they like.