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**Tools and Technology**

Hardware – This section will cover the hardware required to achieve a functional Smart Mailbox prototype.

1. ESP32, Dual-core, 32-bit micro-controller with Integrated Wi-Fi and Bluetooth.

Previous experience within the team using an Arduino microcontroller is limited. Jason has previous experience with programming micro-controllers using LUA, his work exposes him to debugging micro-controllers. However, it has been several years since he has worked with programming micro-controllers.

1. DHT11 Humidity and Temperature sensor module.

No team member experience working with these humidity and temperature modules.

1. Single pole, single throw, (SPST) Microswitch.
2. Micro-controller compatible Breadboard with wire jumpers, used for R&D of prototype.
3. AA batteries and battery pack.
4. Micro USB to USB-C cable to connect to microcontroller.
5. Arduino IDE 1.8.15.
6. Arduino to ESP32 boards manager package to enable the use of Arduino IDE on the microcontroller of choice.