Virtual Summer Schools Coding Juniors

Overview of materials provided • *Raspberry Pi Kit*

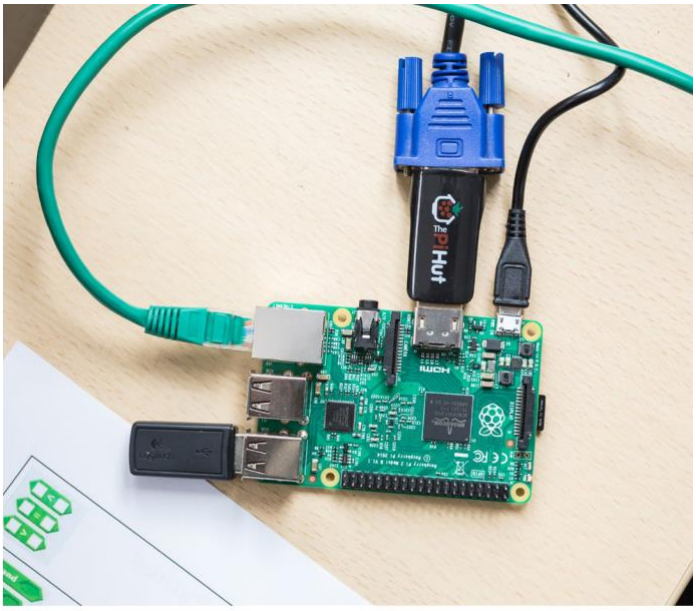
What materials do we provide?

- **Raspberry Pi 4 2GB**
- **Sense HAT**
- **Pi NoIR Camera V2**

What other materials do I need?

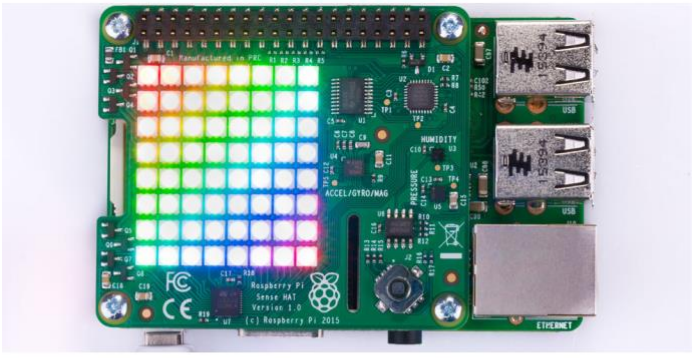
- **USB Keyboard**
- **USB Mouse**
- **MicroHDMI to HDMI cable**
- **Compatible monitor, with HDMI input**
- **USB-C power supply**
- **MicroSD card**
- **WiFi internet**

The **Raspberry Pi 4 2GB** is a tiny desktop computer. Pocket computers have been around for a little while now but the 4th version adds the cherry on the top of the Raspberry Pi! It can support a dual display, including a 4k display. It is full speed and built to be energy efficient and performance focussed at the same time. It has the potential to be a multimedia centre, a PC on its own, a router, your very own Minecraft server, a spy camera, a motion sensor, or whatever you construct it to be. The limit is only your imagination and Python coding skills, and we aim to help students develop both.

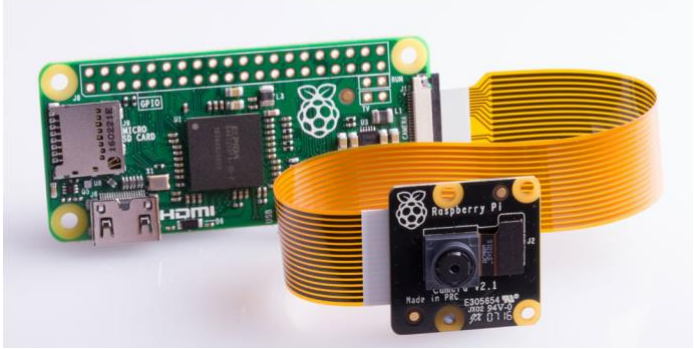


Raspberry Pi Highlights and Details

- Fan-less and energy efficient, it is also much quieter and uses less power than a regular PC
- It has upgraded USBs, now supporting USB3 for full connectivity
- Wireless network support, Gigabit Ethernet, and Bluetooth also available
- Micro HDMI ports that now support 4K resolution (yes, better than a TV!)



The **Sense HAT** is an add-on board for your Raspberry Pi, which turns your microcomputer into an Astro Pi! It has an 8x8 LED matrix, a five-button joystick and introduces the sensors every astronaut needs including gyroscope, magnetometer, accelerometer, temperature, barometric pressure, humidity and many more. The Sense HAT was even used on the International Space Station.



Another innovative add-on for the Raspberry Pi, the **Pi NoIR Camera V2** is an infrared camera module that has an 8MP Sony camera sensor built-in. The NoIR stands for No Infrared filter, which means that your daytime pictures will look curious, and you will be able to see in the dark! Combined with the Sense HAT, you will be able to detect space anomalies.