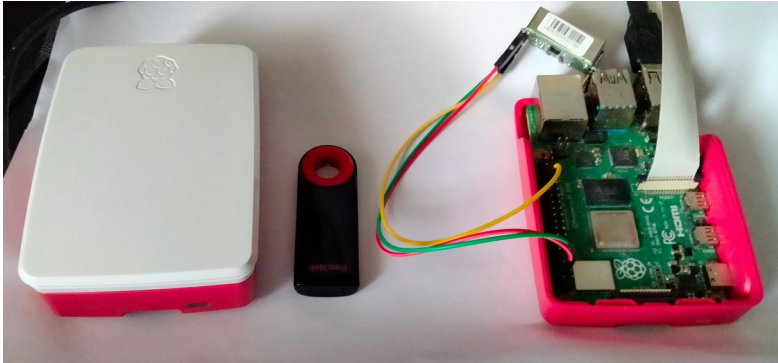


Why Not Try a Pi?

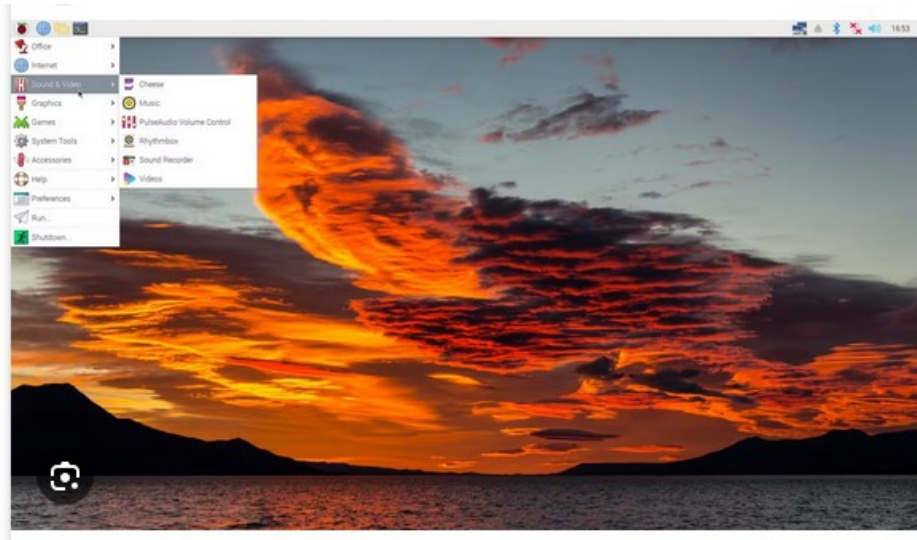
A talk for those who don't know of Raspberry Pis or are hesitating.

What is it?



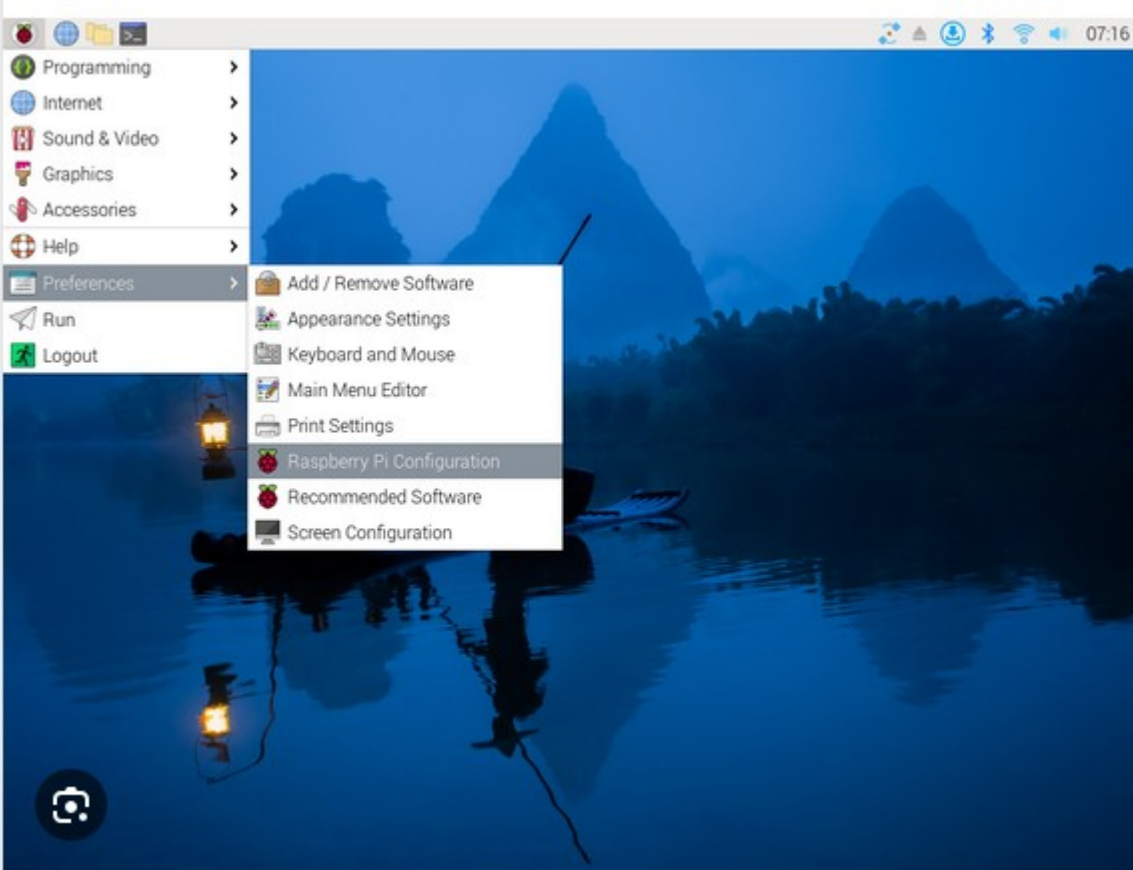
I've added the thumb drive for scale. A small computer about £40, needs screen, keyboard and mouse though.

Oh! It doesn't run Windows!



- It (usually) runs Raspbian from an SD card.
- This is a version of Linux, an open source operating system

But, you get (nearly) everything you need!



- Internet
- Libreoffice (to be added)
- Graphics etc.
- Games (Steam for Linux)

And You Can Explore

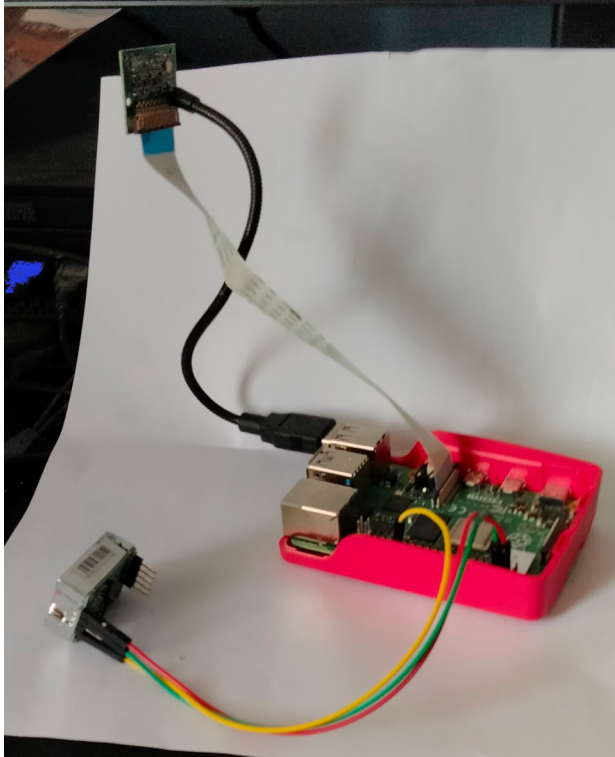
```
hbarnard@ccclite2-1:~/projects/dump1090-fa $ kill -9 18697
hbarnard@ccclite2-1:~/projects/dump1090-fa $ ps -aef | grep dump
hbarnard 19684 11416 50 20:11 pts/0    00:00:00 grep --color=auto dump
[1]+  Killed                  dump1090-fa --write-json /home/hbarnard/m
hbarnard@ccclite2-1:~/projects/dump1090-fa $ ps -aef | grep dump
hbarnard 19686 11416 33 20:11 pts/0    00:00:00 grep --color=auto dump
hbarnard@ccclite2-1:~/projects/dump1090-fa $ ps -aef | grep dump
```

- This is a command line, used since the 1980s and used in every serious tech job now

```
sub get_chat ( $c, $text ) {
  $c->log->debug('in get chat');
  my $chat = OpenAI::API::Request::Chat->new(
    messages => [
      {
        role    => 'system',
        content => 'You are a helpful assistant giving short answers'
      },
      { role => 'user', content => $text },
    ],
  );
  my $res    = $chat->send(); # or: my $res = $chat->send(%args);
  my $message = $res->{choices}[0]{message}; # or: my $message = "$res";
  $c->log->debug('return from get chat');
  return $message->{'content'};
}
```

write your own programs
in any languages. <-- This is
unusual one.

And You Can Explore and Invent



- Not sure what this does
- USB camera
- CO2 sensor (probably)

- Lots of GPIO (general purpose input out pins) available to programs

- Lots of examples on the web

Serious Development Tools Too

- Not just a toy, these tools are used everywhere:
- Linux command line tools
- Git version control (hence Github, Gitlab) look it up
- Your own webserver (Nginx, Apache2)
- Many programming languages, Python, C++ (obscure ones too!)
- Lots of online tutorials and help
- Pijams, from time to time

Permacomputing

- I've tacked this on the end!
- Small computers as opposed to huge datacentres are part of
- <https://permacomputing.net/>
- Simplicity and resilience
- Lower power requirements
- Lower costs, building and running
- Local ownership

Contact and questions

- Thanks for listening
- Questions?
- Hugh Barnard at hugh.barnard@hughbarnard.org and info@nifis.uk