

Raspberry Pis & Microcomputers

April 15

RMIT IIT ASSIGNMENT 2
JAYDYN HOSKINS

Table of Contents

What Is It and What Does It Do? -----2/3/4

What Is the Likely Impact? -----5

How Will This Affect Me? -----6

Bibliography -----7

What Is It and What Does It Do?

Microcomputers and Raspberry Pis are both Mini PCs Mostly referring to credit card-sized single-board computers that have various use cases person to person, The most popular of these devices is named the Raspberry Pi it has had many renditions uses many different levels of performance although was originally used for teaching basic computer science skills in different schools but was also being used outside of this target audience for people wanting to use its basic single board layout for Robotics, Retrogaming, and even weather monitoring.

Raspberry Pi - Wikipedia. (2020). Retrieved 19 April 2021, from https://en.wikipedia.org/wiki/Raspberry_Pi

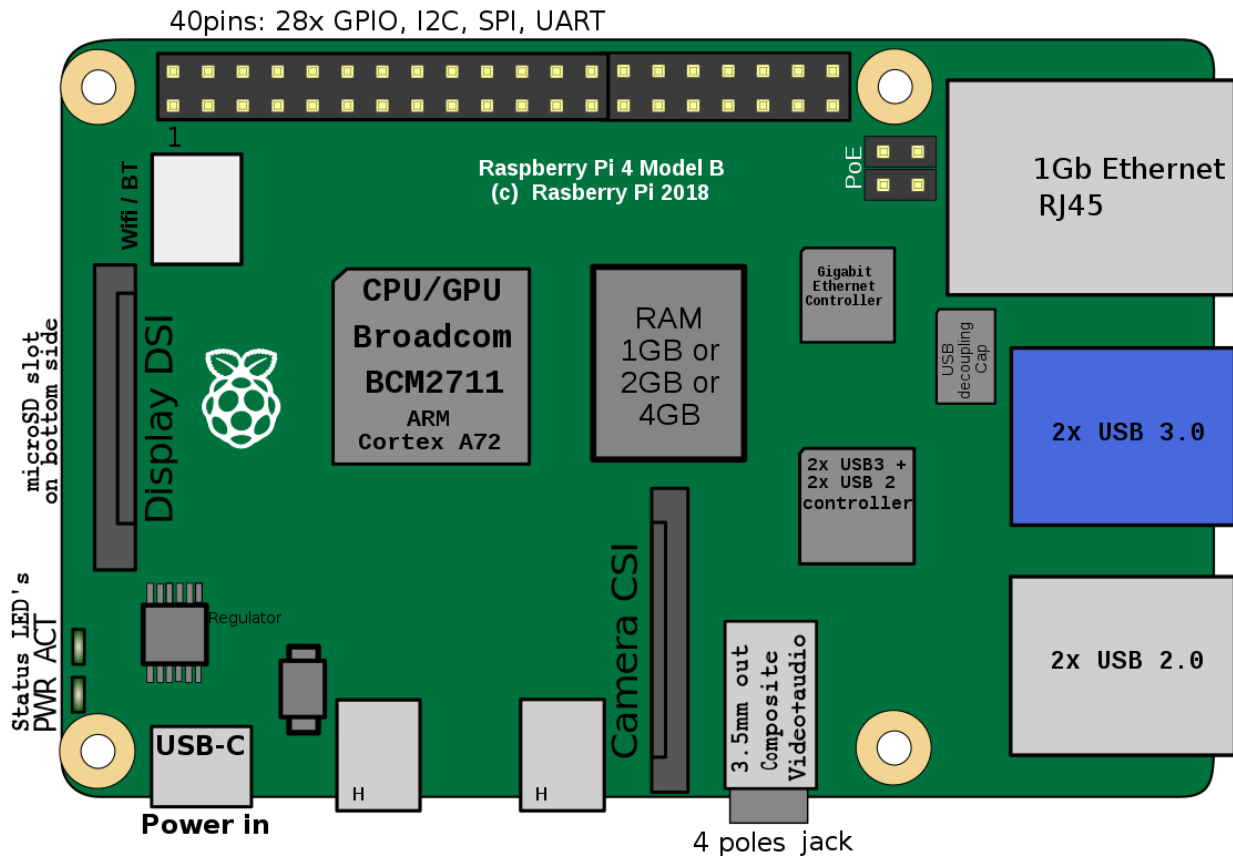
The first model of the Raspberry Pi the named '1 Model B' was launched in 2012 and used a low-powered processor the ARM1176JZF-S With many of the components chosen to be on the single board processor being chosen for its anis price point at only £35. Even though being at this low power and price point it was able to run basic OS (Operating Systems) Such as Linux. This price point also made the product gain popularity with consumers wanting a low-cost PC replacement for basic web searching, but the large spike of this product of with the hobbyist, being one of the first Microcomputers to be at such a low price point opened many of these people to tinkering with it and making various projects with it.

The History of the Raspberry Pi with RPi Zero and RPi3. (2018). Retrieved 19 April 2021, from <https://hitaltech.co.uk/the-history-of-the-raspberry-pi/#:~:text=The%20Raspberry%20Pi%2C%201%20Model,less%20memory%20and%20USB%20ports.>

With the success of the Raspberry Pi even larger companies are approaching the Microcomputer space such as Nvidia, Releasing the Jetson Nano though being used for more professional use cases such as Various machines and AI the Jetson Nano has also caught the eye of many hobbyists who wanted a little more power of the Raspberry Pi and using the device for similar use cases such as robots and Retro Gaming

Introducing the NVIDIA Jetson Nano. (2021). Retrieved 19 April 2021, from <https://www.hackster.io/news/introducing-the-nvidia-jetson-nano-aaa9738ef3ff>





Raspberry Pi - Wikipedia. (2020). Retrieved 19 April 2021, from https://en.wikipedia.org/wiki/Raspberry_Pi

This image is showing the most recent Raspberry pi and shows the layout of this single board computer.

An example of a raspberry Pi projects is the MintyPi a micro gaming handheld using a the RaspberryPi Zero, An even smaller micro computer in comparison to the standard Raspberry Pi Models, This project uses varois custom, 3D printed, and other parts to create this hand held.



mintyPi Archives - sudomod. (2020). Retrieved 19 April 2021, from <https://sudomod.com/category/mintypi/>

What Is the Likely Impact?

With the rise of microcomputers in the professional workplace and home, many other products are now being replaced, Examples of these use cases are Security testing the easy use, and cost of these microcomputers provide many companies the ability to easily test their security systems without putting their current computers under risk.

Many human ran jobs are now being replaced by these microcomputers, such as cashiers with many business saving money by having various kiosk and positions within the workplace replaced by microcomputers, we can look at the restaurant as an example of how these have replaced many jobs that were previously filled by employers such as waitresses many restaurants have already swapped to having customers use a self serve system.

With the rise of even more powerful microcomputers, we could see many cities changes over there hard to keep up systems with these easy to use, replace, and cheaper alternatives over proprietary systems, An example of this may be traffic lights, or within a company cash register, Mcdonalds has actually adopted these micromachines into their service kiosk as is provides enough power to run the basic program used for these machines



Rensi, E. (2021). McDonald's Says Goodbye Cashiers, Hello Kiosks. Retrieved 19 April 2021, from <https://www.forbes.com/sites/edrensi/2018/07/11/mcdonalds-says-goodbye-cashiers-hello-kiosks/?sh=244119e36f14>

These microcomputers used in these kiosks are running a proprietary software developed by mcdonalds called the “NP6” and allow these kiosks to be fairly cheap to manufacture for there chains as they are running on a Intel NUC microcomputer

Self-Service Kiosk Use Cases - Intel. (2021). Retrieved 19 April 2021, from <https://www.intel.com.au/content/www/au/en/internet-of-things/iot-solutions/kiosk/self-service-kiosk-use-cases.html>

With many other companies adopting similar uses for these microcomputers we

How Will This Affect Me?

With microcomputers already being used in many systems throughout the world, you may have already been in contact with a few of them today. If you have recently needed to go to the hospital almost all of these systems are using a microcomputer of some sort such as many of their monitoring systems and tools. The microcomputers allow these tools to be given more features such as allowing a tool to send information gathered by these tools and send to other computer systems within the hospital, examples of these are CAT scanners, and are used in conjunction with electrocardiograms, measurement of respiratory signals, and more.

Microcomputers and their applications for developing countries (1986 report): PART II : Examples of Sectoral Applications: 4 Applications in Health: APPLICATIONS REVIEW. (2021). Retrieved 22 April 2021, from <http://www.nzdl.org/cgi-bin/library?e=d-00000-00---off-0hdl--00-0----0-10-0---0---0direct-10---4-----0-0l--11-en-50--20-about---00-0-1-00-0--4----0-0-11-10-0utfZz-8-10&a=d&cl=CL1.11&d=HASHdf7cdbaf9ac4a3d2ad7870.4.2.2#:~:text=In%20addition%20to%20its%20use,signals%20received%20from%20measuring%20devices.>

Many cars today have some sort of computer built into the vehicles center console and gives many cars additional features such as GPS systems, cars may also use microcomputers for “semi-autonomous” assistance when driving as the car can communicate with the computer and can help with features such as assisted parking and emergency braking

Computer Chips inside Cars. (2021). Retrieved 22 April 2021, from <https://www.chipsetc.com/computer-chips-inside-the-car.html>

Bibliography

What is a microcomputer? - Definition from WhatIs.com. (2021). Retrieved 22 April 2021, from <https://internetofthingsagenda.techtarget.com/definition/microcomputer#:~:text=A%20microcomputer%20is%20a%20complete,microcomputers%20include%20laptops%20and%20desktops.>

Microcomputer - Wikipedia. (2007). Retrieved 22 April 2021, from <https://en.wikipedia.org/wiki/Microcomputer>

Microcomputers in Business. (2021). Retrieved 22 April 2021, from <https://www.referenceforbusiness.com/encyclopedia/Man-Mix/Microcomputers-in-Business.html>

(2021). Retrieved 22 April 2021, from <https://study.com/academy/lesson/microcomputers-in-business-definition-uses.html>

Microcomputer - an overview | ScienceDirect Topics. (2021). Retrieved 22 April 2021, from <https://www.sciencedirect.com/topics/computer-science/microcomputer>

Raspberry Pi - Wikipedia. (2020). Retrieved 22 April 2021, from https://en.wikipedia.org/wiki/Raspberry_Pi

MA, O. (1989). Microcomputer applications in hospital pharmacy practice. *Topics In Hospital Pharmacy Management*, 9(3). Retrieved from <https://pubmed.ncbi.nlm.nih.gov/10314374/>

