IT SCHOOL @ SIS

Łukasz Zmywaczyk

AGENDA

Personal Introduction

Course Introduction

Hardware

- Raspberry PI

INTRODUCTIONS

PERSONAL INTRODUCTION

Hello,

My name is Łukasz Zmywaczyk, and I have dedicated the past 20 years of my life to IT and Software Development. As we are currently witnessing the dawn of the AI revolution, I believe it is crucial for the younger generation to be well-prepared and adaptable to the upcoming changes in our world. To achieve this, I am passionate about sharing my knowledge and experience through my IT School course.

If you are interested in learning more about my experience, please feel free to connect with me on LinkedIn.

COURSE INTRODUCTION

1. Introduction to the course, Hardware
2. Robotics
3. Blockchain
4. Graphics
5. Text
6. AI, ML, Neural Networks
7. Security
8. Server Side
9. Client Side
10. API
11. Message Queues
12. Cloud (AWS)
13. MidJourney, ChatGPT
14. Algorithmics
15. Data Structures
16. Databases
17. HTML 5
18. Internet, DNS, LAN
19. Virtual Machines
20. Linux

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HARDWARE

“ANYTHING THAT CAN GO WRONG WITH HARDWARE WILL—AT THE WORST POSSIBLE MOMENT.”

hardware version of Murphy’s Law

WHAT IS WHAT

CPU

GPU

MOTHERBOARD

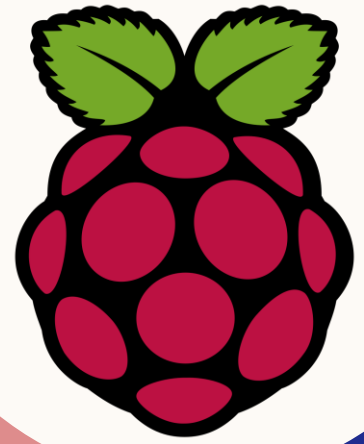
RASPBERRY PI 4

RAM

HDD

PSU

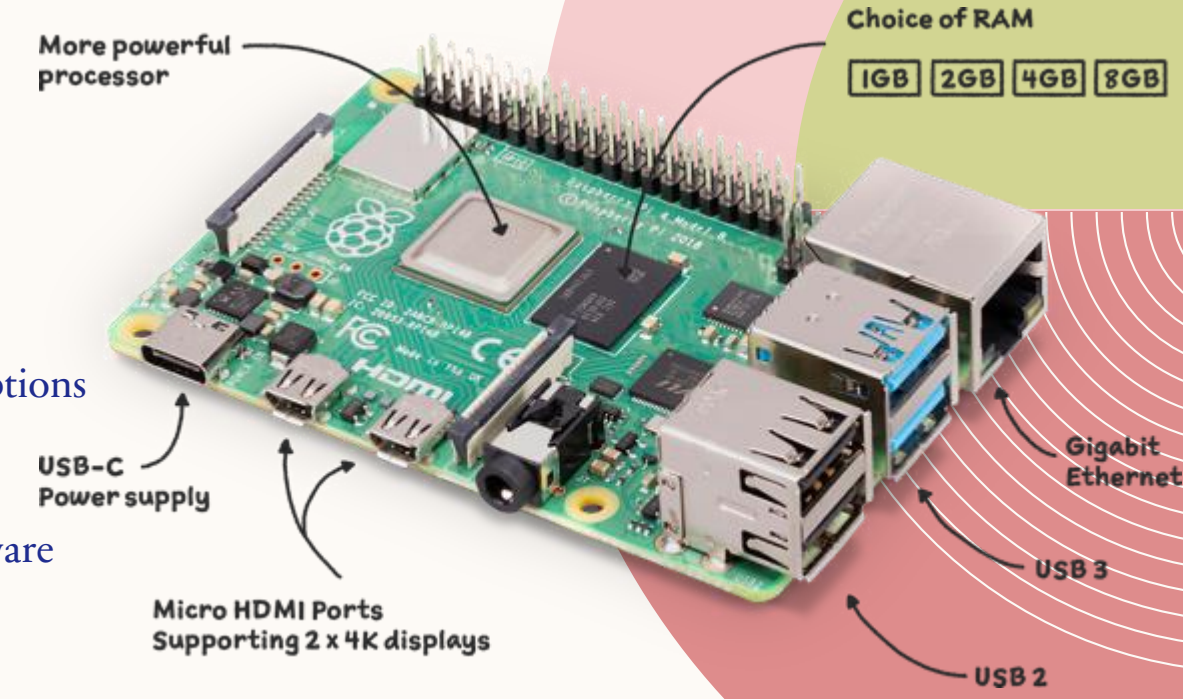
NIC



RASPBERRY PI

POWERFULL MINI COMPUTER

- Quad-core ARM Cortex-A72 processor
- GPU for graphics acceleration
- RAM options (e.g., 1GB, 2GB, 4GB, 8GB)
- USB ports, Ethernet, HDMI, and other connectivity options
- MicroSD card slot for storage
- GPIO (General Purpose Input/Output) pins for hardware interfacing



EXAMPLE PROJECTS

SENSORS

Weather Station

SMART HOME

A smart home security system

JASPER

Voice assistant

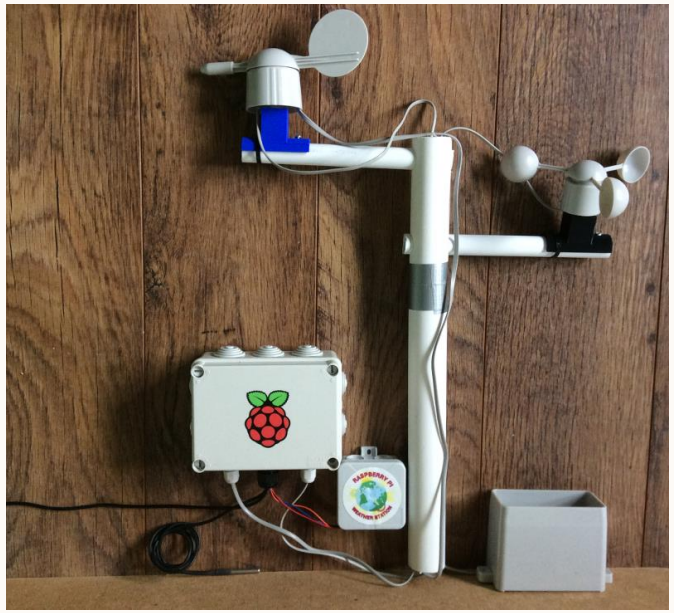
RETRO GAMES

Retro gaming console

MEDIA

Media center for streaming videos and music

WEATHER STATION



- Sensors:
  - Temperature
  - Humidity
  - Pressure
  - Rainfall
  - Air quality ?
  - Air speed
- Data
- Visualization
- Triggers

THANK YOU

Łukasz Zmywaczyk