From the motivation’s aspect, having a hardware connected with a gym machine have shown its effect in motivating people to do workout.

The hardware connection in this research case is a screen that serves differently, based on what user prefer. The first case it when the screen displays music and the ability of displaying a movie if the user wishes to see while, running or doing some exercise.

Et billede, der indeholder træningsudstyr, sport, mur, knæ

Automatisk genereret beskrivelse

The second case is when the screen interacts with the movement of the person that doing exercise. The screen serves as a personal coach that guides the person to harder or to slow down the movement based on the training plan that each person have.

Et billede, der indeholder person, Ansigt, tøj, skulder

Automatisk genereret beskrivelse

By integrating this metologies in a gym machine the training gets to be more fun, because elements of a game gets displayed on the screen which include the joy to a workout section.

Locking on the technical aspect of integereting element fom gamification to the workout machines will be the focus point for the following section.

( end of section 3)

Connection way and its protocol used to get the connection between the device and the machine.

The protocol used for connecting screens to gym machines can vary depending on the specific technology and connection method employed. Here's a breakdown of the protocols commonly associated with each connection method:

1. \*\*Built-in screens\*\*:

- When the screen is built directly into the gym machine's console, the protocol used for communication between the screen and the machine's internal electronics may not necessarily be standardized or exposed to the user. The manufacturer typically implements proprietary communication protocols optimized for their specific hardware and software integration.

2. \*\*External monitors\*\*:

- If the gym machine supports connecting external monitors or devices, it may utilize standard protocols such as:

- HDMI (High-Definition Multimedia Interface): HDMI is a widely used protocol for transmitting high-definition audio and video signals between devices. Gym machines with HDMI ports can output video signals to compatible external displays.

- DisplayPort: Similar to HDMI, DisplayPort is another standard for transmitting audio and video signals. Some gym machines may feature DisplayPort output ports for connecting external monitors.

- VGA (Video Graphics Array): While less common in modern equipment, some older gym machines may support VGA output for connecting to analog monitors.

3. \*\*Wireless connectivity\*\*:

- For wireless connectivity options such as Bluetooth or Wi-Fi, gym machines typically implement industry-standard protocols for communication with compatible devices:

- Bluetooth: Bluetooth Low Energy (BLE) is commonly used for connecting smartphones, tablets, smartwatches, and other wearable devices to gym machines. The Bluetooth protocol enables wireless data exchange and control between the machine and the connected device.

- Wi-Fi: Gym machines equipped with Wi-Fi connectivity can connect to local networks or the internet. They may use standard Wi-Fi protocols such as IEEE 802.11ac or 802.11ax for wireless communication.

4. \*\*Network connectivity\*\*:

- Gym machines with network connectivity options typically utilize standard network protocols for communication:

- TCP/IP (Transmission Control Protocol/Internet Protocol): TCP/IP is the foundational protocol suite used for communication over the internet and local networks. Gym machines with network connectivity use TCP/IP for data exchange, accessing online content, and software updates.

- HTTP/HTTPS (Hypertext Transfer Protocol/Secure): HTTP and HTTPS are application-layer protocols used for transmitting hypertext documents, often associated with web browsing. Gym machines may use these protocols for accessing web-based content and services.

- Other application-specific protocols: Depending on the features offered by the gym machine (e.g., streaming services, virtual training platforms), additional application-layer protocols may be employed for specific functionalities.

These are some of the common protocols associated with each connection method for screens on gym machines. Specific implementations may vary based on the manufacturer and model of the equipment.

To sum up. It can be considered that the gamification elements help to increase the

( jeg er I tvivl om hvor den skal stå hen den her)

Structured workout ( fra Lars).

This is the diagram that shows the training data based on the plan the coach have to training sessions.

the tool dividing the training session into six-time intervals where it begins with a worming up interval and then gets more intensive training. What is interesting is that based on the number of Wolts that each bicycle rider has ( cyklet ), and based on the number of it the tool provide the number of resting days the user should hold in order to be physically ready to the next training sessions.

Et billede, der indeholder tekst, diagram, nummer/tal, skærmbillede

Automatisk genereret beskrivelse

Which tools is used to provide this term of graphs:

The tool used it “Swift”, but there exist other tools that provide the same as Swift. swift controls the resistance.

Swift is to users that is doing training for having fun and at the same time can se their result in the form of graphs. Seriously user use other tools.

The communication between the swift app and the ST(smart trainer) is through the BT and Ant+.

Lars prefers the ANT+ connection because it is more Stabil in the field of communication. BT is not preffered because the BT is mis connected some times.