KOKKUVÕTE

Käesoleva bakalaureusetöö üheks eesmärgiks oli uurida, kuidas on rulluisulint oma viie tegutsemise aasta jooksul ennast ära tasunud, millised on lindi positiivsed ja negatiivsed küljed. Tulemustest selgus, et rulluisulint leiab suurimat kasutamist just talvisel perioodil, kui väljas puuduvad tingimused teatud spordialadega tegelemiseks. 10-st vastanust 6 isikut kasutab ka suvisel perioodil rulluisulinti peamiselt just tehnika parandamiseks ja intensiivsete treeningute tegemiseks. Kuigi suures pildis oldi rulluisulindi kasutamisega rahul, toodi välja mõninga kitsaskohad. Nendeks olid rulluisulindi pikkus, treenija tehnikat analüüsiva tarkvara puudumine, alati peab olema seadme juures kaks inimest, languse imiteerimise puudumine ning treenijale pole teada hetke sõiduandmed, kui seda ei ütle talle lindi kõrval olev isik.

Teiseks eesmärgiks oli rulluisulindi ühe kitsakoha kõrvaldamine, milleks valiti enim uurimuse käigus selgunud idee – lindil treenides soovitakse olulisi andmeid näha enda ees ekraanil, milleks on kiirus, aeg ja tõusunurk. Käesoleva töö raames projekteeriti digiekraan, mis loeb andmeid Unitronics V350-35-TU24-IT kontrollerilt Raspberry Pi-ga. Andmeid loetakse kasutades Javascript programmeerimiskeelt ning luuakse veebileht, kuhu kõik andmed kuvatakse. Veebilehe disainimisel lähtuti lihtsusest, mis läheb kokku projekteeritava seadmega, kus ekraan asetseb peegli taga ja andmed kuvatakse selliselt läbi peegli.

Bakalaureusetöö eesmärk sai täidetud, kus esmalt tuvastati rulluisulindi positiivsed ja negatiivsed küljed ning mille alusel teostati vastav analüüs. Teiseks eesmärgiks oli uurimuse tulemusena selgunud ideele lahenduse leidmine. Käesoleva töö põhieesmärgi täitmiseks sai testitud ja analüüsitud erinevaid tehnilisi võimalusi ning projekteeritud rulluisulindile lisandväärtust loov seade, mis kuvab vajaliku informatsiooni digiekraanile. Käesoleva bakalaureusetöö edasiarendusena on soovitav alustada digiekraani ehitusliku tegevusega.

SUMMARY

One of the aims of this bachelor's thesis was to study how the roller skating treadmill has paid for itself during its five years of operation, what are the positive and negative aspects of the roller skating treadmill. The results showed that the roller skating treadmill finds the greatest use during the winter period, when there are no conditions outside to engage in certain sports. 6 out of 10 respondents also use roller skating tape during the summer, mainly to improve equipment and perform intensive training. Although there were some bottlenecks in the big picture, which were the length of the roller skate, the lack of software to analyze the trainer's technique, there must always be two people with the device, the simulation of downhill skating is not possible and the athlete does not know the current driving data unless told to do so by the person next to the roller skating treadmill.

The second goal was to eliminate one of the bottlenecks of the roller skating treadmill, which was chosen as the idea that became clear the most during the research - when training on the treadmill, we want to see important data on the screen, which is speed, time and angle of inclination. In the framework of this work, a digital display was read that reads data from the Unitronics V350-35-TU24-IT controller with Raspberry Pi. The data is read using the Javascript programming language and a website is created where all the data is displayed. The design of the website was based on simplicity, which coincides with the device to be designed, where the screen is located behind the mirror and the data is displayed through the mirror.

The aim of the bachelor's thesis was fulfilled, where first the positive and negative aspects of roller skating tape were identified and on the basis of which the corresponding analysis was performed. The second goal was to find a solution to the idea that emerged from the research. In order to fulfill the main goal of this work, various technical possibilities were tested and analyzed, and a device that created added value for the roller skating treadmill, which displays the necessary information on a digital screen, was designed. As a further development of this bachelor's thesis, it is necessary to start with the construction activities of the digital screen.