

THE MINERVA PROJECT

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Názov vysokej školy: Materiálovotechnologická fakulta so sídlom v Trnave
Slovenská technická univerzita v Bratislave

Vedúci práce: PhDr. Emília Mironovová, Mgr. Zuzana Šutová

Pracovisko: Oddelenie jazykov PJHV

Rok vypracovania: 2015/2016

Abstract: The aim of my work was to introduce the students' research team called "The Minerva Group", which I am a member of, established by doc. Maximilián Strémy in 2015. In the first part of my project I focused on the beginnings of the group. I investigated into foreign the universities students' voluntary activities and compared it to our project. I explained the idea of kalokagathia, which is our team based on. In the second part of my project I presented our past and future projects, both the scientific and the sport ones. I mentioned our achievements and events we participated in. In the third, final part of my project I draft our future vision. I designed the plan for our team to grow and to get into awareness of potential future members and of the public. I summarized arrangements that have been already done to accomplish this goal and the ones that still have to be done in short or long period of time.

Keywords: student, research, team, EPOC, kalokagathia

THINK AND GO

Vypracoval: Bc. Miroslava Karasová, Bc. Filip Škoda

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Slovenská technická univerzita v Bratislave

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Pracovisko: : Oddelenie jazykov PJHV

Rok vypracovania: 2015/2016

Abstrakt:

Think and Go project deals with controlling a specially modified electric wheelchair by human mind. It was an idea of our supervisor Maximilián Strémy to improve our practical experience and technical skills within the development of this project. The purpose of project is also to find better ways to help disabled people on wheelchairs by using advanced technologies. Headset EPOC+ is used to process thoughts and facial expressions. Original electric system of the wheelchair was upgraded by Arduino to operate wheelchair by EPOC+ instead of joystick. Also new software environment was developed (GetThink, VisMove) for its operation. GetThink application serves to receive and process signals from the EPOC+. VisMove application runs on the user's laptop. This application can show direction of movement in the user interface. EPOC+ and Arduino are connected to notebook to run software and drivers. This all was performed by the Faculty students within the non-profit organization called Minerva. Project is actually in the progress of development and improvement. All has been done within our free time as extra-curricular activity. Currently, we are in the testing phase. The first tests of the electric wheelchair controlled by facial expressions were successful.

Kľúčové slová: Brain computer interface, electric wheelchair, Arduino, EPOC+

STU PARTICIPATION IN SKCUBE PROJECT

Vypracoval: Martin Jančuška

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Pracovisko: Oddelenie jazykov PJHV

Rok vypracovania: 2015/2016

Abstrakt: Slovakia is European leader in automobiles production. But none of automobile manufactures is Slovakian. Slovak companies were often sold to bigger companies and graduates are often leaving the country in job findings. Research of new technologies is also located outside Slovakia. Is our country only production line? SkCUBE is first Slovak satellite program started in 2009 by SOSA (Slovak Organisation for Space Activities). The satellite is CubeSat - a small size cubic satellite with dimensions approx. 10x10x10 cm. This satellite was projected, built and tested by the team of Slovak Universities, astronomers and engineers and also supported by special government subsidy. Estimated launch date is May – June 2016 and will bring us the possibility of realising brand new scientific measurements, testing our new technologies and opening new engineering option. Slovakia is not only an assembly hall. Project skCUBE is unique cooperation of the State, Slovak universities, Students and Slovak companies. We have passion to research and discover new technologies. Project skCUBE shows the potential of Slovak engineering. It allows us to trade knowledge.

Kľúčové slová: skCUBE, satellite, Slovakia, research

SCHEME OF A PERSONAL SELF-LEARNING BOOK SYSTEM

Vypracoval: Dávid Polakovič

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Rok vypracovania: 2015/2016

Abstract: Behind this project is vision of first personal self-learning reading software. In order to properly learn, this software will adapt to your own needs and requirements by collecting data from user in two different ways. Interaction and analysis of users' behaviour while reading. There are 2 sub methods in both input categories. Together there are: 1. Moving point detection system; 2. Eye movement collector; 3. Front & Back touchpad technology; 4. Basic touch display user input.

Final version of this project could effectively adjust to most of users learning habits which may be amount, speed and type of lessons or chapters, as well as actual mental condition. By content creating method, also referred as "Layered text", can reader easier obtain long-term knowledge? Two different ways of data gathering, (shown and hidden to user) guarantee in depth analysis of users reading habits.

Keywords: project, reading software, layered text

MINDSETTING FOR ENTREPRENEURSHIP

Vypracoval: Bc. Michal Slezák

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Vedúci práce: Mgr. Ľudmila Hurajová, PhD.

Pracovisko: Oddelenie jazykov PJHV

Rok vypracovania: 2015/2016

Abstrakt: After graduation from university students have two basic options to become an employee or to become a self-employed person. Are students ready for starting their own business? Small and medium size enterprises are considered pillars of state economy. So it is important and wise to enhance mindsetting for entrepreneurship at universities. This poster presentation aims at mapping the situation concerning mindsetting for entrepreneurship at MTF. It illustrates student's opinion on subject courses how they help to support business spirit. Finally some recommendations for enhancing education leading to entrepreneurship mindset are proposed. We live in a time period when university students after graduation face a difficulty of finding an appropriate job in almost or over saturated labour market in various fields of industry. I prefer proactive attitude to passive waiting for a job. If the students were supported better and more intensively during their studies at university, they would have less problems to start making living.

Kľúčové slová: entrepreneurship, mindsetting, student, university, education.