

Artificial teacher

Author: Alex Ivanov Tsvetanov

Mentors: Assoc. Prof. Zlatogor Minchev
Assist. Prof. Emil Kelevedzhiev

Sofia High School of Mathematics
Sofia, Bulgaria

Summer Research School
2017

Introduction

The main aim of our project is to create a system that combines the newest techniques and to build "artificial teacher" that utilize best practices in organizing training so that it will be interesting, useful and much easier for the students. The most important part of our project is to inspire students, showing them that their subjects can be interesting.

Why it is useful?

It's useful ...

- for self-study
- for modernizing education

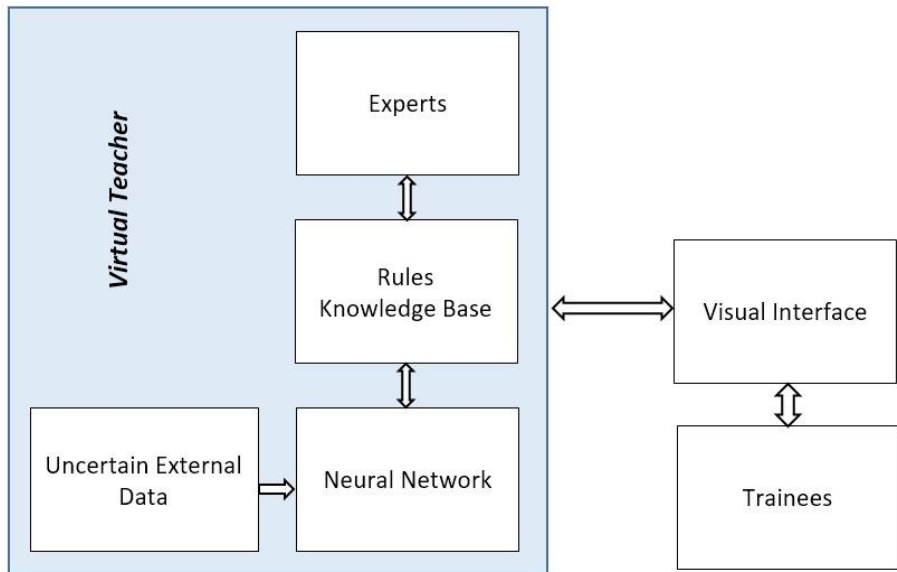
It allows young people ...

- to dive in the most up-to-date technologies

It can ...

- provoke the interest of young people in the school subjects

Architecture



Innovations?

- It combines 2 modern technologies - Machine learning/Artificial intelligence/Neural Network & Virtual Reality
- Learning is closer to the new generations
- Learning is more interactive

What is ready?

- Neural network API
- Prototype of user interface

What is next?

- Improvement of API (it will start to use "expert system")
- Finishing 3D human model
- Building library for voice/text communication with students
- Finishing web-based user interface
- Building API-based mobile application
- Building VR application
- Building AR application

Live prototype demo



Special thanks to:

- Assoc. Prof. Zlatogor Minchev
- Assist. Prof. Emil Kelevedjiev
- Spasimira Ivanova

Acknowledges for:

- VR Express
- iGreet
- High School Students Institute of Mathematics and Informatics
- Bulgarian Academy of Sciences
- Sofia High School of Mathematics

Resources

- *Artificial Intelligence: A Modern Approach*, 3rd Edition, Prentice Hall, 2010.
Stuart Russell & Peter Norvig.
- *Virtual objects seem totally real.*
- *Amelia*. <http://www.ipsoft.com/amelia/>.
- *The Future Of Chatbots And Artificial Intelligence.*
- *Your DNA Avatar - What Happens When Artificial Intelligence Meets Cutting-Edge Genetics?*.
- *GNU Compiler Collection*. <https://gcc.gnu.org/>.
Copyright © 2009 Free Software Foundation, Inc.
- *MariaDB*. <https://mariadb.org/>.
Copyright © 2017 MariaDB Foundation
- *MariaDB++*. <https://mariadb.org/>.
Copyright © 2017 MariaDB Foundation
- *L^AT_EX*. <https://www.latex-project.org/>.



Thank you
for
the attention!