Zhongyuan Yu

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RESEARCH FIELDS

Realistic Rendering
Mesh, 3D Scan Processing
Medical Imaging
Machine Learning, Computer Vision

PROGRAMMING SKILLS

• c++ • cmake • visual studio
• qt • fltk • nanogui

LANGUAGES

• English: SET-6
• German: TestDaf 4/4/4/4

EDUCATION

TECHNICAL UNIVERSITY OF DRESDEN | MASTER OF COMPUTER SCIENCE
Oct. 2018 –Present | Dresden, Germany

TUDIAS | GERMAN LEARNING
Oct. 2017 –Aug. 2018 | Dresden, Germany

SHANDONG UNIVERSITY | BACHELOR OF COMPUTER SCIENCE
Oct. 2013 –Aug. 2017 | Jinan, China

CAPITAL NORMAL UNIVERSITY HIGH SCHOOL |
Oct. 2010 –Aug. 2013 | Beijing, China

PROFESSIONAL EXPERIENCE

HACKATHON 2019 DRESDEN |
The idea was understanding and classification of learning materials with the help of Azure Cloud Computing.

SUPERVOXEL SEGMENTATION OF BRAIN IMAGE BASED ON BILATERAL GEODESIC DISTANCE | not published
The origin work was on 2d.It was a 3d implementation of this paper: Superpixels by Bilateral Geodesic Distance. doi:10.1109/TCSVT.2016.2589781. Not finished because the limited time for research at that moment.

OPTIMIZATION OF THE SPARK FRAMEWORK FOR DEEP LEARNING APPLICATIONS USING TENSORFLOW | bachelor thesis
I implemented a scheduling algorithm for deep learning tasks on computing clusters. It was based on the distributed computing framework Spark and Apache Hadoop.

AN IMPROVED DENSITY-BASED CLUSTERING ALGORITHM WITH GENETIC ALGORITHM | not published
Improved the performance of clustering with the benifits of genetic algorithm.

A VARIANT TO DIJKSTRA ALGORITHM FOR TRANSIT ROUTING AND ITS 2D VISUALIZATION | implemented for the course "Algorithms and Data Structures"
It was achieved by making use of dynamic programming. I developed the software with java programming language, based on the transit routing data in Jinan.

A TOWER DEFENSE CROWDGAME FOR MACHINE LEARNING |
By playing the game, a segmentation of the given map is "automatically" generated.

A RAPID MODEL DESIGNING SOFTWARE FOR 3D PRINTING |
Similar to the game "Minecraft", i developed a game-like software in which one can generate some simple scene and export as obj file. After that, the model can be transformed to the stl file format with python automatically on server side.

HYPERLINK-BASED INFORMATION GATHERING SYSTEM |
The idea was to collect tutorials and some good online materials for language learning effeciently without downloading. For further usage, natural language processing can be involved.