RESUME

Mutian Xu

Oct, 1996
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EDUCATION

2018.09-2020.03 ***University of California, Irvine, USA*** ***Computer Engineering (Master, GPA 3.59/4.0)***
Coursework: Control, Machine Learning & Artificial Intelligence (A+) ; Project in Computer Vision; Introduction to AI; Design and Analysis of Algorithms; Computer Architecture; Operating System; Information Retrieval; Advanced System Security; High-performance Computing; Computer & Communication Networks; Wireless Networking.

2014.08-2018.06 ***Xidian University, China*** ***Electromagnetics Tech (Bachelor, GPA 3.56/4.0)***
Coursework: Linear Algebra; Probability Theory; Numerical Computational Physics; C Language Programming; Microcomputer Principle and System Design; Digital Circuit and Simulated Circuit; Singlechip Microcomputer.

PROJECT EXPERIENCE

2020.06- ***The Convolution on 3D Point Cloud***
Full-time Research Assistant at CVMI Lab, the University of Hong Kong. Supervisor: Prof. Xiaojuan Qi
- Design the efficient and flexible convolution module for 3D point cloud analysis (3D object classification and part-segmentation, 3D scene segmentation) ;
- Submit one paper to the main conference as the 1st author.

2019.07-11 ***3D Object Point Cloud Processing (1st-author paper accepted by AAAI2021)***
Research Internship at Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences. Supervisor: Prof. Yu Qiao
- Propose a geometry-disentangled representation for complementary understanding of 3D object point clouds;
- Use Pytorch on the coding level to realize algorithms and do experiments on various datasets;
- Achieve the ***1st*** place on ModelNet40 3D object point cloud classification accuracy, and top performance on 3D shape part-segmentation task.

2019.04-06 ***3D Object Reconstrution Based on Structured Light***
Master Individual Project. Supervisor: Prof. Charless Fowlkes.
- Write original code to implement image rotation, camera calibration and triangulation;
- Write original code to implement threshold distances, pruning and hole filling for mesh-clean and smoothing;
- Use MeshLab for 3D alignment and Poisson reconstruction, and use Blender to show the final result.

2019.04-06 ***The Parallel Implementation on GA for Solving TSP***
- Use the multiprocessing library of python to parallelize the initial population and the evaluation parts;
- Parallelize the greedy algorithm and add non-migration and migration methods on previous work.

2019.02-04 ***Design and Implementation of Search Engine Based on Inverted Index and Merging***
- Use the XML tree to crawl the URL of the UCI ICS School homepage, and identify the URL with the most external links;
- Search the crawled webpage using Beautifulsoup to get the content of the body part of the webpage, extract keywords using NLTK tokenizer, and use TF-IDF technology to inverted-index the text.

2019.01-03 ***Othello Game***
- Establish an imaginary enemy, use the min-max and the alpha-beta pruning algorithm;
- Let the AI train through self-competition to continuously optimize the chess tricks.

PROFESSIONAL SERVICES

External Reviewer of AAAI2021 & Reviewer of CVPR2021

TECHNICAL SKILLS

Programming Language: Python, CUDA, Java
Tools: Pytorch, Numpy, Pycharm, Jupyter, Linux, Matlab

CERTIFICATE

TOFEL: 104 GRE: 325
2017 second-class school-level scholarship & 2016 third-class school-level scholarship

ABOUT ME

I have a strong interest in Computer Vision. I have been participating in different projects and high-quality research for 2 years. I believe these experience and self-motivation will be my driving force in this field. In my daily life, I have got the Piano Professional Certificate Level 10 and the third place in school singer contest, which brings me much creativity to my career.