Yuxiao ZHANG

Shanghai Jiaotong University
zhangyuxiao@sjtu.edu.cn   +86 15026628386
http://www.zhangyuxiao.me

EDUCATION

Shanghai Jiao Tong University (SJTU), Shanghai   2013 - 2017
School of Electronics, Information and Electrical Engineering (SEIEE)
Bachelor of Science in COMPUTER SCIENCE
GPA : 3.87/4.0 or 91.45/100 (Major), 3.78/4.0 or 89.45/100 (Overall)   Ranking : 13/137

PUBLICATIONS

[1] Renxuan Wang, **Yuxiao Zhang**, Jiaxi Liu, Xiaofeng Gao and Guihai Chen. "AngleCut: A Ring-Based Tree Partition Scheme for Metadata Management in Distributed Storage Systems", prepared for submission to SIGMOD 2017

RESEARCH EXPERIENCES

Smartphone Acoustic Source Localization based on TDoA   2015.11 - present
Supervised by Professor Hongzi Zhu, in Institute of Network and Service Computing, SJTU

- Designed a new acoustic source localization strategy using two microphones of a single smart phone based on TDoA.
- Designed a suitable signal pattern and a refined correlation algorithm with excellent noise resistency to calculate TDoA, and used spline interpolation to improve accuracy.
- Implemented the model based on Android OS smartphone and did massive evaluation works in various scene, trying to improve measuring distance.

Metadata Management in Distributed Storage Systems   2016.3 - present
Supervised by Professor Xiaofeng Gao, in Advanced Network Lab, SJTU

- Designed an innovative approach for distributed metadata management named AngleCut, a ring-based namespace tree partition scheme.
- Theoretically present the space complexity of angel tree.
- Implemented AngleCut algorithm and other algorithm that need to compare with, including Hashe-Based Mapping, Static Subtree Partition and Dynamic Subtree Partition, and practically varified the superior in both locality and load balancing of AngleCut over several other algorithm.

SELECTED PROJECTS

Music action game on embedded system (Top 2 project in SEIEE)   2015 finished
Supervised by Professor Hongzi Zhu, in Institute of Network and Service Computing, SJTU

- Developed a music action game using CPU with limited performance (Cortex M3).
- Interacted directly with hardware and implemented the game using numerical peripherals (LCD, I^2S, I^2C, etc).
- Optimized both in hardware and software. Hardware optimizaion includes using DMA to achieve parallelism in playing music and dealing with LCD events. Software optimization includes minimizing the pixels to draw each frame and generating all the note pattern in advance.

Football and player tracing in low-quality video (Top 1 project in class)   2016 finished
Supervised by Professor Bin Sheng, in the Department of Computer Science, SJTU

- Designed an algorithm to trace the players and football in a video with poor quality and achieved high accuracy.
- Implemented classic object tracing algorithm such as Frame Difference to trace the players.
- Invented a new algorithm, Weighted Matrix, to particularly trace football. The weighted matrix could successfully distinguish football from similar objects such as shoes and gloves in a sequence of frames and achieved a high tracing accuracy of 77%.

Segmentation of Abdominal Adipose Tissues via Deep Learning   2015 finished
Supervised by Prof. Ruimin Shen, in Institue of Computer Application, SJTU

- Designed a deep learning algorithm whose segmentation time was 20 seconds per slice, with an accuracy of: 0.94+/-0.02 for SAT, 0.88+/-0.04 for VAT.
- Implemented user friendly UI and allowed users to manual revising the error parts.
- Implemented 3D Volume Rendering of multiple images with OpenGL.

INTERNSHIP

Internship at **Intel** Asia Pacific R & D Center(Open Source Technology Group)   2016.6-present

- WebGL2 Feature Investigation and Benchmark Design
    - Investigated 3D graphics rendering process and GLSL shading language.
    - Designed and implemented numerical benchmark tests for WebGL2's new feature including Transform Feedback, Multiple Target Rendering, Instance Drawing, etc..
    - Verified the performance enhancement of these tests when adding WebGL2 new features. (You can check these

benchmark tests at https://github.com/zyxiaooo/WebGL2_bench.)
- ChromeOS WebDriver Auto Control with Python
    - Proposed an approach of using Selenium to control the browser in ChromeOS. Normally, we can control the browsers of Linux and Windows easily with Python, but things were quite different in ChromeOS.
    - Implemented the approach and provided a class with which users could control the browser of ChromeOS just like other OS.

SKILLS

Language & Tools:	C/C++, JavaScript, Python, Java, MATLAB, OpenCV, OpenGL & WebGL, HTML, swift, Verilog, LaTeX
Platform:	Windows, Linux, Android, IOS, Embedded System
Others:	Audio&Video Processing with Pr, Au, Ps

AWARDS

Pan Wen Yuan Scholarship (5/693)	2014
Acadamic Excellent Scholarship	2014
Acadamic Excellent Scholarship	2016
Honorable Mentioned in MCM	2016

EXTRACURRICULUM ACTIVITES

Member of Alumni Service Association	2014
Volunteer in Shanghai International Marathon	2014
Volunteer in blood donation,	2016