Shike(Emma) ZHANG

zsk9026@gmail.com • (+86)15821936320 • https://github.com/ShikeZhang

EDUCATION

Shanghai Jiao Tong University, CHINA **SEP 2015 - JUN 2019** (Expected)
B.S. in Computer Science, Scholar of ChuntSung Program

Major GPA: 90.66/100 **Overall GPA:** 90.13/100

Scholarship Awards: National Scholarship (Top 2%), Weichuang Scholarship (Top 2%), B-class Scholarship for Excellent Academic Performance, SJTU (Top 10%)

Core Curriculum: (Major:) Operating Systems (99), Compiler Principles (99), Mathematical Foundations of Computer Science (94), Database System Technology (93), Software Engineering(92) Computing Theory (91), Computer Graphics (91), Cloud Computing (90), Computer Network (90), Computer System Architecture (90), Professional Practice (90)
(Mathematics:) Probability and Statistics (96), Linear Algebra (95), Discrete Mathematics (90), Calculus I (88, 8%), Calculus II (93, 4%)

PUBLICATIONS

Shike Zhang, Yuxiang Liu, Xiaofeng Gao, Jiaqi Zheng and Guihai Chen. "Provably Efficient Algorithms for VNF Routing Optimization". The 24th International Conference on Parallel and Distributed Systems (ICPADS), Sentosa, Singapore, December 11th-13th, 2018 (Oral Presentation).

RESEARCH EXPERIENCE

DataSpread - Enabling Interactive Big Data Management. **JUL 2018 - PRESENT**
Advisor: Prof. Kevin Chen-Chuan Chang *University of Illinois Urbana Champaign*
Program: Independent Work on Content Aware Storage Model. Summer Intern.
Objective: Speeded up spreadsheet computation for selective formulas such as Vlookup and Match.

- Proposed a content aware storage model, using the idea of clustered index to help speed up computation.
- Dynamically adjusted the model in terms of query input using the idea of database (spreadsheet) cracking, instead of pre-building the structure.
- Implemented the storage structure based on existing code using Java.

VNFs Placement and Routing in Datacenters. **SEP 2017 - SEP 2018**
Advisor: Prof. Xiaofeng Gao *Shanghai Jiao Tong University*
Program: ChuntSung Program (Shanghai), research intern
Objective: Found the minimal costs for Virtual Network Functions (VNFs) routing.

- Formulated the problem as a combinatorial chaining set cover problem, proved its NP-hardness and reduced it to the Group Steiner Tree
- Used a two phase approach to address the overall problem.
- Simulated a network with 400 nodes and 4 VNFs using Python. Our solution had significant performance improvement in terms of total cost, CPU and memory utility comparing to three heuristic algorithms.

SELECTED PROJECT EXPERIENCE

Realtime Face Recognition, *Shanghai Jiao Tong University* **Spring Semester (2018)**

- Implement frontend with **PHP** to handle user requests of (a) Querying photos in terms of a time period (b) Querying photos in terms of user's certificate photo (c) Deleting and inserting user profiles.

Large Pose Facial Expression Recognition
Shanghai Jiao Tong University **Autumn Semester (2017)**

- Perform large-pose facial expression tests using **Python (TensorFlow)**, based on a work on CVPR2016 of 3D face alignment

Anomaly Network Intrusion Detection Using the Method of Machine Learning,

Shanghai Jiao Tong University **Spring Semester (2017)**

- Perform an offline network intrusion detection based on the KDD dataset and the 41 characteristics in it.
- Use the method of **Decision Tree**, **SVM** and **KNN**. We at first do **PCA** and choose a subset of the 41 characteristics. Next we perform training and achieve a 94% overall accuracy.

EXTRA-CURRICULUM ACTIVITIES

Meritorious Winner Prize, Mathematical Contest in Modeling (Top 10% out of 10670) **Global 2018**
2nd Prize, National College Student Physics Competition (Top 10%) **Shanghai 2016**

Yiyou: Department of Publicity in SJTU, member **2016-2017**
Qi Yin elementary school, Volunteered Teacher **2017**
Shanghai International Marathon, Volunteer **2016**

ACADEMIC ACTIVITIES

Reviewer

– Journal on Selected Areas in Communications (J-SAC) **2018**

Membership

SKILLS

Programming Languages: C++(Good-at), Java, Python, PHP, SQL, Matlab, HTML/CSS, Scala
Operating Systems and Tools : Linux, LLDB, LaTeX, Docker, Unity
Database Engine: Postgres, Mysql, MongoDB
Frameworks : Tensorflow, OpenGL
TOEFL : 108 (R28 L26 S26 W28)