

Qiang Su

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EDUCATION

Northeastern University (NEU), School of Computer Science and Engineering

Shenyang, China

B.E. in Computer Science and Engineering

09/2014~07/2018

- Overall GPA: 4.1146/5.0 | Rank: 6/256 (2014-2018)
- *Scholarships*: 2016 National Scholarship from Ministry of Education China(Top 1%) | 2015 “Zhong Tian Gang Tie” Educational Scholarship (Top 1%) | 2017 China National Encouragement Scholarship by PRC Ministry of Education (Top 5%) | 2015 First-Class Scholarship of NEU (Top 5%) | 2016 & 2017 twice Second-Class Scholarship of NEU (Top 10%)
- *Competition*: 2016 The honorable Mention of Interdisciplinary Contest in Modeling(ICM) for international college students
- *Leadership*: 2015 Pacesetter of Excellent Student in NEU | 2016 Excellent Student in NEU | 2017 Excellent Student Leader in NEU
- IELTS: 6.5 | CET-6: 532

PROGRAM EXPERIENCE

Modeling for **European Refugee Flow Problem**

NEU | 01/2016

- Quantified the whole problem with information entropy and analytic hierarchy process, and turned the map into a weighed shortest route problem based on the quantification results.
- Combined an integrated evaluation model and an optimization model. Solve problems by A* heuristic search method, as well as do some comparisons with proposed model such as the only optimization model.
- Gave the best route of European refugees and wrote a report to give some policy advice.

Design of an **C-like language compiler**

NEU | 06/2017~07/2017

- Split the source C-like codes into some tokens (lexical analysis). And constructed a formulation that meets LL(1) grammar and handle the tokens(grammar analysis).
- Added node actions and analyzed the domain of variables (semantic analysis).
- Generated objective codes based on the grammar tree constructs by above steps, map the actions into x86 codes. This compiler could translate a C-like language program into x86 codes.

Research about **Accurate and Timely Measurement System in Data Centers**

PKU| 01/2018~05/2018

- Use PF-RING to capture packets in 1G line speed, while every packet is 64 bytes.
- Introduce the sketch-based data-gathering algorithm to process the packets and obtain the flow information in high speed.
- Transmit the flow information to servers for subsequent analysis by ZMQ mechanism.
- Plan to introduce the machine learning technology or the event-level programming language for automatic network management.

Research about **Automatic Address Configuration with Malfunctions in Data Centers**

SUSTC| 07/2018~09/2018

- Introduce the automorphism of classic widely used DC like FatTree to avoid massive graph comparisons.
- Reduce both the time usage and memory overhead by calculate the hash values of the rows in the adjacency matrix.
- Configure the FatTree in which k equals to 100 in 2 seconds with about 160MB memory overhead.
- Plan to compare with DAC and evaluate in a practical DC if possible.

SKILLS

- Programming: C | C++ | Java | MySQL | VHDL Language: Bilingual in English and Chinese
- Mathematics: Advanced mathematics | Linear algebra | Numerical Analysis
- Other Skills: Basketball | Ping pong | badminton | Skating