SHILONG LI · 黎 诗龙

Email: lisl2018@mail.sustech.edu.cn ◇ Website: lethal233.github.io

650A South Tower, College of Engineering, 1088 Xueyuan Avenue, Shenzhen 518055, P.R.China

Education

Southern University of Science and Technology (SUSTech) Shenzhen, China

Bachelor of Engineering, Computer Science and Technology *Sept. 2018 – Present*

- **GPA 3.86/4.00 (Ranking: 5/154)**
- Member of Software Quality Lab (SQLab), supervised by Prof. Yepang Liu

Work Experience

Software Testing Engineer(Intern) Lakala Payment Co., Ltd, Shenzhen, China

Supervised by Dr. Xinming Wang *Sept. 2021 – Present*

- Design and construct an automated test framework for the Blockchain service (LKLBaaS) including Unit Testing, Functional Testing, Performance Testing and Stress Testing
- Wrote fundamental introduction and user guide of the LKLBaaS
- Collected information and materials of the LKLBaaS and compile the patent technical disclosure

Research Experience

Comprehensive Study on Quantum Computing Bug Symptoms, Causes and Fixes SUSTech, NTU

Supervised by Prof. Yepang Liu *Jan. 2021 – Aug. 2021*

- Comprehended fundamental knowledge of quantum computing and empirically studied the defects inside the quantum domain software bugs
- Collected closed bug issues from GitHub repositories related to quantum program, classified and labelled the them from four aspects (quantum related, symptom, root cause, fixing strategy)
- Summarized key statistics and provided a summary information of these open-source quantum computing bugs to software testing engineers.

Automated Recovery of Archaeological Artefacts SUSTech

Supervised by Prof. Dalun Gao *Jan. 2020 – Sept. 2021*

- Classified and labelled around 1,000 archaeological artefacts collected from 30 organizations around China
- Conveyed plausible and effective way (e.g., Machine Learning, Iterative Closest Point Algorithm) to recover those archaeological relics
- Set up server runtime environment and obtained recovery product in 0.05 Hamming Loss through 2,800 iterations of Gererative Adversial Network training

Project Experience

Database SQL Online Judge System–Phantom OJ | *Java, Python, Spring* Sept. 2020 – Dec. 2020

- Co-designed system database architecture and initial draft logo of Phantom OJ
- Implemented fundamental logical services in the backend and designed Restful backend API interactive with frontend
- Implemented multi-authority secure system and cached high-frequently used data

Magic Square & Sudoku Solvers | *Java, Nodejs* Apr. 2021 – May 2021

- Co-developed a web app to efficiently solve magic square and sudoku using optimized Evolutionary Algorithm

- Result: implemented a logarithmic algorithm to solve 20 × 20 magic square within 1 second

Contribution to Open-source Software Issues | *Java, Git, Github CI* Feb. 2021 – May 2021

- Addressed more than 30 issues mentioned in the open-source software fastjson and easyexcel
- Requested 5 Pull Requests to fastjson and easyexcel using Test Driven Developement method, and 3 of them were successfully merged

Rust implementation of xv6 | *Rust, C, qemu* May 2021 – June 2021

- Implemented basic file system and debugged assembly problem on the open-source Rust implemenation of xv6 code on C

Visualization of Taxi Trip | *Python, deck.gl, React, mapbox* Apr. 2021 – May 2021

- Implemented a web app to visualize one-day taxi trip of shenzhen dynamically

WIFI Module Communication on STM32 | *C* Nov. 2020 – Dec. 2020

- Developed the entire embedded software system of WIFI module on STM32 microcontroller to communicate another one by WIFI module and displayed information on the LCD screens of the STM32

HTTPS traffic capture and analysis | *Python, Mitmproxy, Baidu & Virustotal API* Sept. 2020 – Dec. 2020

- Developed a automated tool to capture HTTPS traffic and filter out bad information using mitmproxy on mainstream operating systems

AI-project | *Python, sklearn* Sept. 2020 – Dec. 2020

- Implemented Mini-max algorithm of the zero-sum game Reversi, IC and LT models on Influence Maximization Problem and linear model on text classification

VGA Displayer | *Verilog, Minisys* Nov. 2019 – Dec. 2019

- Co-developed the digital system of VGA displaye using structural code and Minisys hardware, writing individual components of the processor to output images on the screen using VGA

Honors and Awards

The **First Class** (Top 5%) of the Merit Student Scholarship, SUSTech Oct. 2019, 2020, 2021

Outstanding Teaching Assistant, SUSTech June 2021

2021 Mathematical Contest in Modelling, Successful Participant Apr. 2021

6^{th} Chinese Undergraduate Physics Experiment Competition, First Prize Dec. 2020

2020 Contemporary Undergraduate Mathematical Contest in Modeling, Winning Prize Oct. 2020

Outstanding freshmen scholarship, Third Class, SUSTech Nov. 2018

Teaching and Services

Co-maintainer and -developer of the SUSTech Application Apr. 2021 – Present

Teaching Assistant of CS102A: Introduction to Java Programming, SUSTech Spring 2021

Student Assistant of Institute for Advanced Studies in Social Sciences Sept. 2019 – Aug. 2021

Teaching Assistant of CS207: Digital Logic, SUSTech Fall 2020

Student Volunteer of the 42^{nd} International Conference on Software Engineering (ICSE 20) June 2020

Additional Information

Programming Language: Java, Python, C/C++, SQL(Postgres), Go, JavaScript, HTML/CSS, Rust

Frameworks: SpringBoot, Spring Security, MyBatis, Node.js, JUnit

Developer Tools: GitHub, Docker, TravisCI, VS Code, PyCharm, IntelliJ, MATLAB, Google Analytics

Libraries: pandas, NumPy, Matplotlib, Scikit-learn, Selenium, bs4

Language: Chinese–native; English–fluent

Interests: Taekwondo(9 years), Baseball, Basketball, Travelling