Zhanwei Zhang (张展玮)

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No. 1088 Xueyuan Avenue, Nanshan District, Shenzhen, Guangdong

Education

B.Sc. in Computer Science and Technology, Southern University of Science and Technology (SUSTech)   **Sep. 2021 ~ Now**

Turing Master Class

Advisor: Yepang Liu

GPA: 3.79 / 4.0 | Weight Avg Score: 90.86 | Ranking: 34 / 188

Main courses: Introduction to Math Logic(A+), Introduction to Computer Programming(A+), Calculus(A), Linear Algebra(A), Data Structures and Algorithm Analysis(A), Principles of Database Systems(A-), Machine Learning(A), Compilers(B+)

Visiting Researcher, Wuhan University   **May. 2024 ~ Now**

Research

Estimating Global Aviation CO2 Emissions with Comprehensive Flight Data   **Apr. ~ Dec. 2022**

Analyze 10 TB data (1 billion records) using statistical and machine learning methods.

Submitted to Environmental Science & Technology on April 16, 2024.

LLM-Based JSON Parser Fuzzing for Bug Discovery and Behavioral Analysis   **Sep. 2023 ~ Jan. 2024**

Use opensource LLMs such as Llama2-7B/13B to generate test cases.

13 JSON Parsers and over 100 types of cases have been tested. Over 26 behavioral diversities have been found.

Selected Projects

Othello Game through Java and Python Programming with Strong AI   **Oct. ~ Dec. 2021**

Developed visually appealing interface and implemented Monte Carlo & Alpha Beta Pruning algorithm.

Rank: 3/29 | Win Rate: 81% (In Turing Class)

Capacitated Arc Routing Problem Solver   **May 2023**

Implemented a memetic algorithm and hybrid metaheuristic approach to produce high-quality solutions efficiently.

Achieved optimal solutions in small and medium-sized instances within 180 seconds.

Produced comparable results with 20% deviation for larger instances with up to 255 vertices and 347 routes.

Canteen Traffic Monitoring (https://sustech.online/canteen)   **Dec. 2023 ~ Jan. 2024**

Calculate the length of the queue by monitoring data, and display a chart showing the changes in queue length.

Won award for finalist in National College Students' Innovation and Entrepreneurship Training program.

About 30,000 visits within three months.

Simple Compiler   **Sep. 2023 ~ Jan. 2024**

Developed a compiler that translates C language files into Intermediate Representation (IR) and MIPS32.

Supports essential features such as I/O operations, control flow and function calls.

Includes lexical, syntax, and semantic analysis, along with informative error messages.

Patents

一种点餐方法、系统、终端及介质 (Innovative Ordering Method, System, Terminal, and Medium Patent)   **May 2023**

Innovated a method and system to alleviate peak-hour traffic in cafeterias.

Applied on May 5, 2023; Application no: 202310498065

Skills

Languages: English (Fluent), Mandarin (Proficient), Cantonese (Proficient)

Programming Languages & Frameworks: Java, Python, C/C++, SQL, Spring Boot, Vue

Tools: IntelliJ IDEA, PyCharm, Visual Studio Code, Anaconda, Git

Honors & Scholarships

Honorable Mention, Mathematical Contest in Modeling   May 2023

Finalist, National College Students' Innovation and Entrepreneurship Training program   June 2023

Third Prize, China Undergraduate Mathematical Contest in Model   Sep. 2023

Outstanding Student   Jan. 2024