

YUANTIAN DING

96 Jinzhai Road, Hefei, Anhui, 230026, P.R.China
+86-13371207851 ◇ dnailzu@mail.ustc.edu.cn ◇ [Linkedin](#)

EDUCATION

University of Science and Technology of China 09/2018 - 06/2022 (*Expected*)
BS School of Gifted Young, Major: Computer Science, GPA: 3.97/4.3 (Ranked 6/251)
Selected Courses: Compiler (95/100), Mathematical Logic (98), Operating Systems (95)

EXPERIENCES

JFass - A New Serverless Platform with Customized JIT Design

Nanjing University Internship. With [Zhiqiang Zuo](#) (NanJing U) [Harry Xu](#) (UCLA) ([More Info](#)) 07/2021 – Present

- Traditional runtime optimizations such as JIT compilation fail to enhance performance in modern FaaS platform.
- As modern FaaS platform executes functions in a independent container, it can not leverage jitted code and profile infomation in other container in JIT compilation.
- Leverage profile information sharing and native code sharing to improve performance.
- Futher reduce profiling overhead using hardware tracing technology.

Order Scheduling in Disk-based Graph Processing

Advanced Data System Lab, USTC. With Yongkun Li ([More Info](#)) 09/2020 - 01/2021

- Intended to reduce IO overhead in disk-based graph processing systems.
- Reduce IO overhead by scheduling the order of data block loaded by the system.
- Reduce almost 1/2 IO through this new algorithm.

ASC-21 - Accelerating PRESTO Pulsar Search

ASC Student Supercomputer Challenge, USTC Group. With Hong An 09/2020 - 01/2021

- PRESTO is a large suite of pulsar search and analysis software. We need to improve the performance of PRESTO in the contest.
- Gain 10x speedup than the original pipeline.
- Provide an asynchrone NUMA-aware server arranging the task pipeline.

SMALL TOOLS

[Typell](#) : An LL(1) Parser Generator based on Type System (Haskell)

- Proposed a new way to write LL(1) parser. Make it easier to add new production rules.
- This type system can be futher used in designing a language which can support any DSL in LL(1) grammar.

[enum-lexer](#) : Another Lexer Generator based on Rust Proc-Marco (Rust)

- Intend to provide a more straightforward API than other lexer generators.
- Available in crate.io and had 200+ downloads.

[WangProver](#) : A Simple Automatic Theorem Prover for L(X) (Scala)

- An efficient theorem prover for the logic system in my textbook.
- Using a simple resolution theorem proving technique.
- Provide a heuristic algorithm for enumeration.

SKILLS

Programming	C/C++ (Proficient), Rust (Proficient), Java (Familiar), Scala (Intermediate), Haskell (Intermediate)
English	TOEFL 97

AWARDS

- ASC Student Supercomputer Challenge (First Prize) *2021*
- ACM-China International Parallel Computing Challenge (Third Prize) *2020*
- USTC Outstanding Students Award *Silver - 2021, Gold - 2020, 2019*
- USTC Freshman Students Award *Silver - 2018*

EXTRACURRICULAR

- Teaching Assistant in "Analog and Digital Circuits" *2020*