

ZIPING SUN

☎ (+86)18516279008 ✉ me@szp.io 🔗 <https://szp.io> 📄 <https://github.com/sunziping2016>

Job intention: Compiler/Programming Language > System/Backend > Data Analysis > Frontend

EDUCATION

Tsinghua University *BS in Software Engineering* 2015.9 - 2020.7
GPA 3.67 rank 20/83

Tsinghua University *MSc in Software Engineering in Progress* 2020.9 - 2023.7
Directed by Min Zhou, engaged in *Static Program Analysis*, especially Value Flow Graphs

TECHNIQUES

Programming Languages	Rust, C/C++, Java, Python, TypeScript, Haskell, Verilog etc.
Machine Learning	NumPy, Pandas, PyTorch; Crawling with Scrapy
Web	Vue, React; Koa, Tornado, tokio etc.; various SQLs and NoSQLs
Team Work	Leading nearly all team projects; Good at CI, Agile, Documentations
Others	ArchLinux, TUNA member, perfectionist; devoted in code analysis

INTERNSHIPS

Association for Science and Technology *Minister of Technique Department* 2016.11 - 2018.1
Voting System, WeChat Danmaku, Luck Draw System, training other members

Microsoft STCA *Code search using deep learning* 2019.7 - 2019.7
Implementing CODenn, refactoring data processing

Others: **Pony.ai** *Improving tests* **Megvii** *Optimizing tensor operations* **ValiantSec** *code analysis*

PROJECTS

Machine Learning

THUCourseSpider: Automatic course crawler; over 95% CAPTCHA recognition accuracy with RNN

Others: Anime avatar generation; MLP with multi-thread and SIMD; Transfer learning library

Web Frontend & Backend

YAWeChatTicket: Ticket system on WeChat; RBAC; RESTful; PWA; over 10 thousand LOC

Others: WeWall, Danmaku; Real-time voting system; Lite consortium blockchain

Games

Qt-PlantsVsZombies: Fake Plants vs Zombies with Qt, available on Bilibili BV1ub4y1v7MF

Others: Motion sensing game; Side-scrolling parkour game; Online Tic-tac-toe and Snake; HTML5 game; Mine sweeper cheating

Algorithms & Low-Level Systems

zhihu-search-engine: Implementing vector, list, hash map and a fast HTML parser; full-text search

ftp-server: non-blocking IO base on epoll; user management; bcrypt password encryption; dual stack

ray-tracing: Multi-threading and generic AoSoa SIMD ray tracing; Python FFI

SoundMessage/Localization: OFDM+QPSK sound modulation; Locating with FMCW; On Android

Others: Implementing RSA; Assembly mspaint; Lite database; Functional interpreter; My static analysis toolkit (WIP)

PUBLICATIONS

Cao, Z., **Sun, Z.**, et al. (2018, October) Deep Priority Hashing. In *the 26th ACM MM*

Sun, Z., Zhou, M. (Submitted for publication) Fast and Incremental Algorithm for Dominator Tree