Fan Gao

✉ gaofan404@gmail.com   📱 (608)-949-2074   🌐 github.com/fire-sale

EDUCATION

University of Wisconsin, Madison   **Madison, United States**
B.S. in Computer Science, Mathematics.GPA: 3.83/4.00.   *Sept. 2019 - Est. Dec. 2021*

University of Electronic Science and Technology of China   **Chengdu, China**
Major in Computer Science and Technology. GPA: 3.9/4.0.   *Sept. 2017 - June 2019*

Competitions

Gold Medal (*Rank 3/180*), **ACM-ICPC** North Central North America Regional Contest   Nov, 2019
Second Prize, China Artificial Intelligence Innovation Contest   Oct, 2018
Silver Prize, Huawei Code Craft Challenge   Apr, 2018
Outstanding Project, Microsoft Student Club Practice Studio Program   Mar, 2018

Projects

News Feed Web Application   *Aug.2020 - Oct. 2020*
- Built a web application for users to browse news and receive news feed with **React** and **Node.js**.
- Implemented multi-thread news and RSS feeds crawling and store contents with **MongoDB** and **Redis**.
- Designed a news recommendation system with **TensorFlow** by monitoring users' logs.

Automatic Tuning for Database Configuration   *Oct. 2020 - Jan. 2021*
- Integrated several methods such as Bayesian Optimization and reinforcement learning to automatically search for a better configuration for knobs in LevelDB and MySQL.
- Optimized the searching process by identifying key knobs iteratively.
- Achieved performance increase of up to 2.5x for objects such as throughput or latency.

Adaptive Concurrency Control in Main Memory Databases   *Mar. 2020 - May. 2020*
- Implemented several concurrency control protocols with **C++** in a database prototype from scratch.
- Designed strategy to allow the database adopt different concurrency control protocols dynamically by monitoring and forecasting key metrics using **Scikit-learn**.
- Achieved throughput increase of up to 30%.

Blog System   *Feb. 2019 - Apr. 2019*
- Designed a generic blog system that supports friendly management of users, articles and comments.
- Implemented the frontend UI with **Bootstrap** and backend service with **Django** on **MySQL**.

Skills & Courses

- **Languages:** experienced in Python/C++/Java/JavaScript, familiar with Go/Rust/C#/SQL
- **Selected system courses:** Databases, Networks, OS, Programming Languages, Parallel Computing, Graphics, Design Next-gen Databases, ML-optimized Systems.
- **Selected theory courses:** Data Structures, Algorithms, AI, ML, Optimization, Text Mining.