Fan Gao

gaof@cs.wisc.edu (608)-949-2074 fire-sale.github.io

EDUCATION BACKGROUND

University of Wisconsin, Madison **Madison, United States**
Major in Computer Science, Mathematics *Sept. 2019 - Est. Dec. 2021*
GPA: 3.921/4.00.
Research Interests: Systems for machine learning and big data, distributed systems, formal methods.

University of Electronic Science and Technology of China **Chengdu, China**
Major in Computer Science and Technology *Sept. 2017 - June 2019*
GPA: 3.92/4.0.

Israel Institute of Technology **Haifa, Israel**
*Summer Session Visiting Student with **Full Scholarship*** *July 2019 - Aug. 2019*

Competitions

ACM-ICPC International Collegiate Programming Contest *Nov. 2019*
- Gold Prize (ranked **3/180**, 1.6%) in North Central North America Regional Contest. ICPC is the most famous college-level competitive programming contest in the world. Coach: Prof. Dieter van Melkebeek.

Huawei Code Craft Challenge *Mar. 2018 - Apr. 2018*
- Designed algorithms to predict future demand for cloud services and allocate virtual machines optimally.
- Silver Prize (top 10 in 1515 teams, 0.7%). Won the green card of Huawei Research Intern.

EXPERIENCE

Independent Research Under Prof. Shi Gu **Chengdu, China**
Research Assistant *May. 2018 - Sept. 2018*
- Exploring graph neural networks, neural style transfer and machine learning for 3D data.

Projects

Mini Distributed Key-Value Database (In progress) *Apr. 2020 - May. 2020*
- Aims to develop a high-available distributed KV database in Go that supports distributed transactions, balance scheduling, Paxos-like algorithm for distributed consensus and TLA+ to verify correctness.

Adaptive Concurrency Control in Main Memory Databases *Feb. 2020 - Apr. 2020*
- Course project in CS 839 (Design Next-Gen Database). Designed adaptive concurrency control protocols based on system monitoring and workload forecasting and dynamically adopt different concurrency control protocols according to some key factors (contention, abort rate, etc.).

Precision Agriculture Based on Unmanned Aerial Vehicles *July 2018 - Oct. 2018*
- We used comprehensive methods like Mobile SSD, NVDI to predict crop yield and monitor the health status of crops. This project is based on a DJI Inspire UAV and PaddlePaddle deep learning framework.
- National Second Prize (top 10 in 1049 teams, 1%) in the China Artificial Intelligence Innovation Contest. Won the green card of Baidu Intern and 10,000 RMB bonus.

Sentiment-controllable Stylic Music Generation *Dec. 2017 - Mar. 2018*
- Given input sentences, this project aims to create music that matches the emotion of the texts. The model contains two parts: a text sentiment detector using LSTM; a stylistic composer using sequence-GAN.
- Selected as one of the best projects (top 10 in 583 projects, 1.7%) in Microsoft Student Club Practice Studio Program.

Extracurricular Activity

Microsoft Student Club @ UESTC
Vice-Chairman, Leader of Tech Department *June 2018 - June 2019*

- Organized coding training for freshmen and hosted weekly tech talks.
- Won the certificate of "Star of the Club" from Microsoft Research Asia.

SKILLS

- Programming languages: experienced in C++/Python, familiar with Java/Rust/Haskell/JS/Go/LaTeX/Matlab
- Selected courses: data structures, algorithms, AI, ML, computation theory; computer organization, database, network, programming languages, parallel computing, design next-gen database.