

MIAOCAI (KELVIN) PAN

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👤 EXPERIENCE

Demonware Inc. *Pr. Software Engineer* *Shanghai, China* Sep 2017–Present

- Developing backend service for global game titles like Call of Duty.

Sunway Fund *Partner, Full-Stack Developer* *Shanghai, China* Jul 2016–Aug 2017

- Maintain the IT infrastructure and the software stack: CI/CD, security, monitoring, alerting.
- Market data retrieval, cleansing and processing from futures exchanges in China using the CTP API.
- Develop event-driven trading engine for CTA strategies with order/transaction/position management support.
- Develop web apps for market data visualization and tick by tick backtesting.

Douban Inc. *Sr. Systems Engineer, formerly Back-End Web Developer* *Beijing, China* Jul 2013–May 2016

Developed and Maintain Distributed Cache Infrastructure

- Responsible for the distributed cache infra in Douban Inc. Improved it to a low-latency and high-reliability state.
- Designed and implemented libmc, which is the most lightweight and fastest Memcached client library for Python.
- Improved the route algorithm of the cache cluster. Scale the cluster, migrate nodes, deploy and upgrade softwares.
- Improved the monitor and alert of the whole caching facility. Implemented automated tools for SA.
- Worked together with product engineers to cache friendly and efficiently.
- Oncall and troubleshooting online systems when in emergency.

Developed Douban FM (douban.fm)

- Developed Douban FM, mainly focus on perf tuning, audio file management and delivery.
- Designed and developed Anti-spam strategies on play-counting service for Douban Artist.
- Developed deduplication service among millions of songs using audio fingerprinting technique.
- Implemented a recommendation algorithm using content-based audio features, ranking top 5% among all recommendation algorithms (prior weight).

Douban Inc. *Back-End Web Developer Intern* *Beijing, China* Jun 2012–Dec 2012

- Extracted a variety of audio features using open-source audio feature extractors, tried to combine them with existed recommendation system for Douban FM.
- Developed a content-based music classification algorithm for the High / Easy channels in Douban FM.

Taobao Inc. *R&D Engineer Intern* *Hangzhou, China* Jan 2012–Mar 2012

- Developed a web app for BPMN (Business Process Model and Notation) visualization.

🔗 OPEN SOURCE CONTRIBUTIONS

- **libmc**: A Fast and light-weight Memcached client for C++, Python and Golang. I'm the principal developer.
- **Yaafe**: An audio feature extractor in C++ and Python. I Fixed some Mem leaks and added slicing support.
- **AcousticBrainz**: Promoted the cooperation between Douban Inc. and MTG-UPF, and contributed all content-based audio features computed in Douban Inc. to the AcousticBrainz project using my spare time.
- **CVE-2014-9497**: A security vulnerability I reported to the mpg123 software.
- SEE ALSO My GitHub: TA-Lib, DPark, greenify, anyconnect-virtual-router.

⚙️ SKILLS

- Knowledge domain: Caching, Network programming, Memory Management, Performance analysis.
- Programming languages: Python, Cython, C++, C, Golang, Java, JavaScript, Bash, L^AT_EX, Qt.
- Things I like: Vim, Git, Ansible, CMake, Docker, Packer, Sentry, Memcached, Redis.

