

# Huang Menglong

SOFTWARE DEVELOPER · DATABASE EXPERT

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## Summary

I am a developer with more than 10 years of experience, currently focusing on **distributed systems**. I am looking for work in the direction of **distributed databases**, **storage systems**, and **scheduling systems**.

I have rich experience in Go and C++ development, and I am expert in design and architecture of **highly available** distributed systems. I would prefer a technologist type job to a management oriented position.

## Work Experience

### PingCAP, Inc. [🔗](#)

Beijing, China

DATABASE DEVELOPER

Oct. 2015 - Present

- Designed and implemented **distributed transaction** of *TiDB* [🔗](#). Fully support ACID features in distributed environment. Correctness and performance are verified by more than 1000 production clusters.
- Designed and implemented a distributed **scheduling system** for multi-raft storage systems to meet high availability and cluster disaster recovery capabilities, and also provide cluster load balancing.
- Leading the design of the **cross data center deployment** architecture of TiDB, including various deployment schemes such as Three Data Centers, Three Data Centers in Two Cities and Two Data Centers in One City.
- Designed and implemented a **replica placement system** [🔗](#) for multiple deployment scenarios and HTAP architecture.
- Leading the design of a **distributed timestamp allocation scheme** [🔗](#) across data centers while guarantees strong transaction consistency.

### Sincetimes, Inc. [🔗](#)

Beijing, China

GAME DEVELOPER & TECH LEADER

May. 2012 - Sep. 2014

- Responsible for the development of several web games and mobile game servers. Made several extensive changes to the company's server framework to accommodate new game genres.

### Changyou, Inc. [🔗](#)

Beijing, China

GAME DEVELOPER

Mar. 2010 - May. 2012

- Participated in the development of a 2D MMORPG game.

## Education

### DLUT(Dalian University of Technology)

Dalian, China

B.S. IN SOFTWARE ENGINEERING

Sep. 2006 - Jul. 2010

## Publication

2020 **VLDB 2020**, *TiDB: A Raft-based HTAP Database* [🔗](#)

## Honors

2019 **Bronze Medal**, TiDB Hackathon 2019, *Embracing Elasticsearch: Giving TiDB the wings of full-text search* [🔗](#)

2018 **Bronze Medal**, TiDB Hackathon 2018, *TiQuery: All Diagnosis in SQL* [🔗](#)

## Projects

- TiDB (PingCAP)**: open source distributed HTAP database compatible with the MySQL protocol [🔗](#)
- TiKV (PingCAP)**: Distributed transactional key-value database, originally created to complement TiDB [🔗](#)
- PD (PingCAP)**: Placement driver for TiKV [🔗](#)
- iter (Side Project)**: Go implementation of C++ STL iterators and algorithms [🔗](#)
- Luson (Side Project)**: Self-hosted JSON API server [🔗](#)

## Articles (in Chinese)

- The Commit Point of distributed transaction* [🔗](#)
- Understanding external consistency* [🔗](#)
- TrueTime and atomic clock* [🔗](#)
- From learning Paxos to understanding Raft* [🔗](#)
- Evaluating failure probability* [🔗](#)
- Understanding multi replica of TiKV* [🔗](#)
- Even node Raft can be useful* [🔗](#)
- Understanding F1 online schema change* [🔗](#)