

HAI-LIANG HAL WANG

Technical architect focused on delivering scalable and reliable solutions that bring strategic vision to reality. Senior backend developer with specialty in distributed systems and various algorithms. Go expert, open source author and contributor of dozens of projects



EXPERIENCE

- Present
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Sep 2020

Principal Engineer
Ninety Percent of Everything 📍 London
 - Built a global weather service on top of 2TB grib2 files per year
 - Rewritten a legacy reporting service with comprehensive calculations from Java to Go
 - Re-architected data aggregation pipeline for high-frequency vessel data
 - Implemented a data quality evaluation service for vessel status data
 - Built a position interpolation service with rhumbline algorithm
 - Designed a Go package for Kafka streaming applications with high scalability, throughput and robustness
- Sep 2020
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Dec 2018

Lead Developer
Ninety Percent of Everything 📍 London
 - Solved data quality issues with Unscented Kalman Filter
 - Built service chassis for data science Python models and streaming services
 - Implemented data cleansing Kafka stream service based on JEXL expression filter
 - Maritime voyage estimator (TCE and time charter) for liquid and dry cargo vessels
 - Name lookup algorithm: word-wise prefix search based on suffix array
 - Geometric algorithms: shortest path and geo-fencing in polygonal domain on sphere
- Oct 2018
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Sept 2018

Senior Developer
StorageOS 📍 London
 - Helped to bring StorageOS to v1.0.0, which is enterprise persistent storage for containers, supporting fast orchestration and high availability
 - Fixed a panic issue in logrus (PR #857)
 - Troubleshoot goroutine and memory leaks
- Aug 2018
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Mar 2018

Senior Architect at Tik Tok
ByteDance 📍 Shanghai
 - Optimized Discovery Page by porting it from Python to Go: latency from 839ms to 187ms and error rate from 1.3% to 0.0004%
 - Designed and implemented I18N service, efficient server and client that provide every other service multilingual templates
- 2018
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2015

Backend Lead of R&D
Appcoach 📍 Shanghai
 - Led the development of Appcoach Market: a multi-regional, horizontally scalable and fault tolerant ad network
 - Built API with high availability, high throughput and low latency (latency < 10ms and QPS > 2K per core)

CONTACT INFO

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🌐 h12.io
🐙 github.com/h12w
in hal-wang

SKILLS

System Architecting
Scalable System Design
Reliability Engineering
Performance Optimization

Writing Clean Code
Requirements Analysis
Unit Testing
Refactoring

Languages
Go
Python
Java
C
SQL

Microservices
gRPC/GraphQL/Thrift
Docker/Kubernetes
etcd/Consul

Cloud Computing
Amazon Web Services
EC2, S3, ELB
PostgreSQL, MySQL

Realtime Analytics
Kafka
Grafana
MongoDB
Cassandra
BadgerDB
h12.io/sej

- 2015
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2011
 - PhD Student of Systems Engineering**
 Xi'an Jiaotong University
 - Designed a concurrent, simple and extensible web scraping framework (h12.io/getgo) to collect data from online social networks
 - Published *Exploring the Efficiency and Mechanism of Whistleblowing System on Social Networking Site* on IEEE ICC 2014 Conference
- 2011
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2009
 - Software Engineer at SPSS Data Collection**
 IBM
 - Rewrote visual filter editor of survey reporting with recursive descendant parser and functional pattern matching
- 2009
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2006
 - Software Engineer at Wafer Testing Team**
 Qimonda
 - Developed testing system for DRAM wafer in C++ and assembly

📍 Xi'an

📍 Xi'an

📍 Xi'an

Parser & Generator

h12.io/gombi
h12.io/ua
h12.io/xsd
h12.io/html-query
h12.io/json-schema
h12.io/schemata

Web Technologies

HTML
CSS/SASS
JavaScript/React
Markdown

OPEN SOURCE

- present
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2018
 - Run**
 h12.io/run
 - mini-framework for graceful goroutine orchestration
 - goroutine pool and leak prevention, throttle and logging
- present
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2012
 - Socks**
 h12.io/socks
 - SOCKS protocol client package with over 400 stars on Github
- 2017
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2015
 - json-schema**
 h12.io/json-schema
 - a generator from JSON Schema specification to Go struct
- 2017
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2014
 - GSpec**
 h12.io/gspec
 - An expressive, concurrent and extensible Go test framework
- 2015
 - Aliyun-oss-go-sdk**
 github.com/aliyun-beta/aliyun-oss-go-sdk
 - Winner in the contest for developing Alibaba Cloud OSS Go SDK

EDUCATION

- 2007
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2004
 - Master of Science in Systems Engineering**
 Xi'an Jiaotong University
 - MS Thesis: *An Efficient Approach to Spam Filtering and its Implementation in Email System*
- 2004
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2000
 - Bachelor of Science in Information Engineering**
 Xi'an Jiaotong University
 - Won First Award of the National Undergraduate Electronic Design Contest