

# Litong Deng

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## PROFESSIONAL EXPERIENCE

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### Compass, Inc.

Jun 2021 - Present

Software Development Engineer

Remote

#### Company background

Compass is a U.S.-listed Fortune 500 company focused on information technology services for the residential real estate industry and has approximately 28,000 agents on its platform. All members of the Chinese R&D team work remotely, with a team size of 150-200 people.

**Tech stack:** Bazel, Thrift, gRPC, Monorepo, Circle CI, Datadog, Opsgenie, Amazon Web Service

#### Document Intelligence Platform

- **Project background:** Responsible for the compliance review of customer transaction documents, building an Event-Driven streaming processing system based on the Amazon Textract + Amazon Augmented AI platform, which can extract PDF document text, customize audit rules and thresholds (using Drools), and trigger manual processes, etc., greatly improving the efficiency of compliance audits and reducing audit costs.
- **Main contributions**
  - Responsible for early feasibility research, investigated Indico and AWS Textract solutions, based on E2E Demo verification and stress test (Locust), exposed Indico single instance connection number performance issues, special character recognition, disk space occupation, and other usability issues, ensuring the technical solution feasibility.
  - Independently built the skeleton code of Amazon Textract + A2I, solving the difficult problem of OOM in the Gamma environment and ensuring the timely release of new services.
  - During the development of the Compass AI Model, AWS Step Functions were optimized from serial to parallel execution, shortening the recognition time of a single document from an average of 2 minutes to 30 seconds (based on 450 PDFs with a total of 10,084 pages).
  - Lead the refactoring of Splitting Service, combine task splitting with team members, take into account development progress and team member growth, and improve the team's delivery efficiency.
- **Work gains**
  - Integrate and build an open and inclusive team collaboration culture.
  - Learned the typical technical architecture of American unicorn-level companies (Bazel, Thrift, gRPC, Monorepo, Circle CI, Datadog, Opsgenie, etc.).
  - Understand the common technical capabilities of AWS (Cloudformation, Secret Manager, SQS/SNS, Lambda, Step Functions, etc.).

#### Transaction Journey Buy Side Tools

- **Project background:** Buy Side Tools is responsible for providing customers and real estate agents with a series of tool services in the home buying process, including Saved Searches, Collections, Tours and Client Dashboard, etc., providing customers and real estate agents with one-stop home purchasing services to assist Customers achieve business success in Compass.
- **Main contributions**
  - Established the China back-end team from scratch, provided team members with appropriate training and Q&A support, and ensured the delivery capabilities of the back-end team.
  - Participate in the On-Call rotation within 2 months of joining the team, which effectively reduces the On-Call pressure on the US team.
  - In the process of migrating the Collections Service from the old architecture (Mongo) to the new architecture (Apache Kafka Streams), I efficiently undertook the back-end interface migration work and ensured the progress of the service migration.
  - In response to the Profile Service service migration process, as Epic Owner, I independently analyzed the workload assessment of all changes in the system, broke down the tasks into details, and scheduled them for team members

to advance. At the same time, we worked closely with the upstream team to effectively promote the progress of migrating Profile Service to new services.

- In the process of developing the new Client Dashboard service, I proactively clarified doubts about the technical design documents with the US team, paid attention to and promoted blocked tasks in each Sprint, and collaborated efficiently with the mobile team to advance the progress of service development.
- **Work gains**
  - Learned the design of Event Driven microservices based on Apache Kafka Streams, and increased the practice and understanding of Event Driven microservices.
  - Learned the microservice design of read-write separation based on the Command Query Responsibility Segregation pattern, and increased the practice and understanding of data-intensive applications.
  - Increased practice and understanding of maintenance and migration of PostgreSQL TB-scale data.

## **Alibaba**

Dec 2020 - May 2021

Software Development Engineer

Guangzhou

**Tech stack:** High-speed Service Framework(RPC), Pandora Boot, RocketMQ, Taobao Distributed Data Layer(TDDL), Redis

### **Lingxi Interactive Entertainment-Jiuyou APP Server**

- **Project background:** Jiuyou APP provides platform-level capabilities to link game resources and game players. The APP includes game distribution, Jiuyou SDK, game live broadcast, Jiuyou Q&A, game group chat, and other functions to provide users with high-quality games. experience.
- **Main contributions:**
  - Responsible for developing the Q&A list sorting function of Jiuyou, implementing the popularity sorting algorithm and being compatible with business field level sorting, effectively increasing the number of views of the Q&A content.
  - Responsible for developing back-end operation settlement requirements, including detailed data cleaning and task incremental calculation functions, deepening the understanding and practice of the accuracy of the fund settlement system.
  - Responsible for developing labeling and display labeling functions, deepening the understanding and practice of distributed cache hot and cold data update strategies.
  - Responsible for developing the automatic deletion function for cloud resource audit violations, deepening the understanding and practice of message queues.
- **Work gains:**
  - Learned Alibaba's demand development and project management processes.
  - Learned the challenges of mobile interface design, preventive programming, and backward compatibility.
  - Understand Alibaba's platform-level technical architecture, the technical challenges of million-level products, and high-standard coding requirements.

## **Xiaomi Technology Co., Ltd**

Aug 2018 - Oct 2020

Software Development Engineer

Beijing/Wuhan

**Tech stack:** Jenkins, Golang, Zookeeper, Docker, K8s, SpringBoot, Redis, ElasticSearch

### **Xiaomi Private Cloud**

- **Project background**
  - Xiaomi Private Cloud, is mainly responsible for improving internal service efficiency collaboration, internal service operation requirements, and internal service cloud migration, etc. The team has successively developed new businesses such as the feedback system, online customer service (IM), service home page, and integrated service center. The team has achieved a good response.
- **Main contributions**
  - Based on the Xiaomi MIMC framework, the customer service online function was quickly developed, giving users and service providers real-time dialogue capabilities, providing multi-terminal synchronization capabilities (Web/WeChat/Feishu applet, etc.), and one-click creation of work orders based on consultation content.
  - Responsible for the construction of the team's user data system, counting the UV/PV data of each function entrance, and supporting the team's business decisions.

- When Xiaomi introduced Feishu, I explored combining group business with Feishu. The robot developed supports the submission, inquiries, and browsing of work orders in the Feishu channel thread.
- Promote feedback tools and customer service online tool negotiation to 15+ product lines.
- **Work gains**
  - After going through the process of product creation, development, and maturation, I have an increased understanding of how to make products.
  - Won the Quarterly Star (Business Pioneer) of the Cloud Platform Department once, and won the year-end bonus manager's commission (5,000 ¥) once.
  - Experienced team splitting and reorganization, increasing understanding of team building and new member training.

#### **Tunas Pipeline**

- **Project Background:** Tunas Pipeline is the service release management platform within the Xiaomi Cloud Platform. It connects to existing CICD tools such as Gitlab, code scanning, and image deployment, and provides functions such as one-click deployment, rollback, and viewing execution logs.
- **Main contributions**
  - Developed the Jenkins engine module to implement stateless functions, and used Zookeeper to implement service registration and discovery.
  - Optimized the Jenkins Logstash plug-in, batch writing to ES greatly improves the performance of writing logs.
  - Fixed the unavailability problem of Gitlab cluster pseudo-attack, avoiding 2900+ users from an average of 1 hour of unavailability each time.
  - Independently developed the permission control function to connect Gitlab permissions to achieve rapid mapping and isolation.
  - Collaboratively responsible for user promotion work, exercising communication skills, and strengthening awareness of product feedback.
- **Work gains**
  - Review the reasons for project failure, realize the connotation and importance of focusing on users, and realize the importance of communication within the team.
  - Recognize the problem of unequal power and responsibilities between upstream and downstream, and recognize the timing of superior resource investment in project development.

#### **Huawei Technologies Co., Ltd**

Jul 2017 - Aug 2018

Software Development Engineer CodeHub

Shenzhen

**Tech stack:** Gitlab, Spring Boot (Ruby on Rails)

#### **Huawei Software Development Cloud DevCloud Project Team**

- **Project background:** Huawei Software Development DevCloud is a one-stop DevOps solution that provides end-to-end continuous and rapid delivery capabilities, covering project management, code hosting (CodeHub), compilation and build, code inspection, automatic deployment, release, testing, and other processes to help enterprise users iterate quickly and achieve business success.
- **Main contributions**
  - Participated in the team's Gitlab kernel upgrade (8.1.6 -> 9.4.3), switching from a single to a distributed architecture; independently built a new cluster monitoring system based on Prometheus + Grafana, which effectively assisted in the rapid location of 2 online problems.
  - Responsible for maintaining the code warehouse capacity reporting module. Actual testing found that 2 legacy bugs triggered incorrect deductions. After consulting with other teams, the SQL change statement was written and executed, online dirty data was cleared, and the business risk of incorrect deductions for users was avoided in advance.
  - In the process of writing page automation test cases, I used product capabilities and Git knowledge to overcome the problem of network connectivity between the blue zone and the green zone, improve the maintenance efficiency of test cases, and reduce duplication of work.
  - Participate in product feature discussions, put forward many suggestions for improvements, and be responsible for page-friendly design.

- **Work gains**

- Understand the capabilities of the DevOps development toolchain, become familiar with the code hosting architecture, and broaden horizons about development, testing, operation, and maintenance.
- Developed a solid engineering practice ability and initially developed a certain product awareness.

## EDUCATION

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**South China University of Technology**

Sep 2013 - Jul 2017

Computer Science and Technology Bachelor

Guangzhou

- Award: Third Class Scholarship of the School (2013-2014)
- CET6:497