# Xudong Zhang

Front-end Engineer | 027-386-9215 | st_kalen@outlook.com

## Education

**University of Auckland** Mar. 2025 - Now
Master of **Information Technology**

**Anhui University, China** Sep. 2017 – Jun. 2021
Bachelor of Arts in **Internet and New Media**
**GPA: 3.84/5.0**
**Scholarship:** National Encouragement Scholarship in 2018.

**Anhui University, China** Feb. 2019 – Jun. 2021
Bachelor of Engineering (Minor) in **Computer Science and Technology**
**GPA: 3.29/5.0**

## Professional Experiences

### Senior Front-End Engineer — Nov. 2023 – Feb. 2025
### Hangzhou Jinritoutiao Technology Co. (Subsidiary of ByteDance)

**1. Douyin (also known as TikTok) Group Buying Ability Development**

*Project Background:*
In the business background of Life Services in Douyin, merchants hope to sell more products as well as attract more customers. If several users are willing to purchase products together, a discount can be offered, which is a kind of group promotion. Douyin also aims to attract more users to utilize its products. Group buying means that after a user places an order, they must invite a specified number of people to join in purchasing a product at a better price within a set time frame. Only when the requirements are met can the user and their invited users obtain the product. If the task is not completed, the user will not receive the product, and their payment will be refunded. Users can sign up multiple times.

*Main Outputs:*
I discussed user interaction flows with UI designers, explored technical solutions and data structure designs with data engineers and back-end developers. Managed the project rhythm during development, supporting Douyin in introducing this new transaction type under an existing complex transaction model, ultimately ensuring a smooth project launch. After going live, the project led to an increase in both platform user base and merchant transaction volume.

**2. Douyin Life Services Confirmation Payment Page of Development**

*Project Background:*
The confirmation payment page for Douyin's Life Services plays a crucial role in the overall transaction flow. Users can confirm the product information they wish to purchase, select promotional activities, provide contact information, and choose their payment method. After confirming everything is correct, they can submit the order to complete the payment, finalizing the entire payment. The confirmation payment page handles tens of millions of users daily and generates over 200 million in daily revenue, significantly impacting the overall transaction volume.

*Main Outputs:*
① Optimized the display logic for product information, pricing, and quantity selection based on related requirements, allowing faster user perception of the products they are about to purchase, enhancing user interaction experience.
② Adapted the confirmation payment page for foldable screens and tablets, ensuring proper display on these devices and improving user experience, thereby increasing the likelihood of user transactions.
③ After users purchase specific hotel promotional packages, relevant interfaces are displayed post-payment to remind them to make reservations promptly, facilitating hotel redemption.

### 3. Douyin Life Services B-end Internal Tools Platform

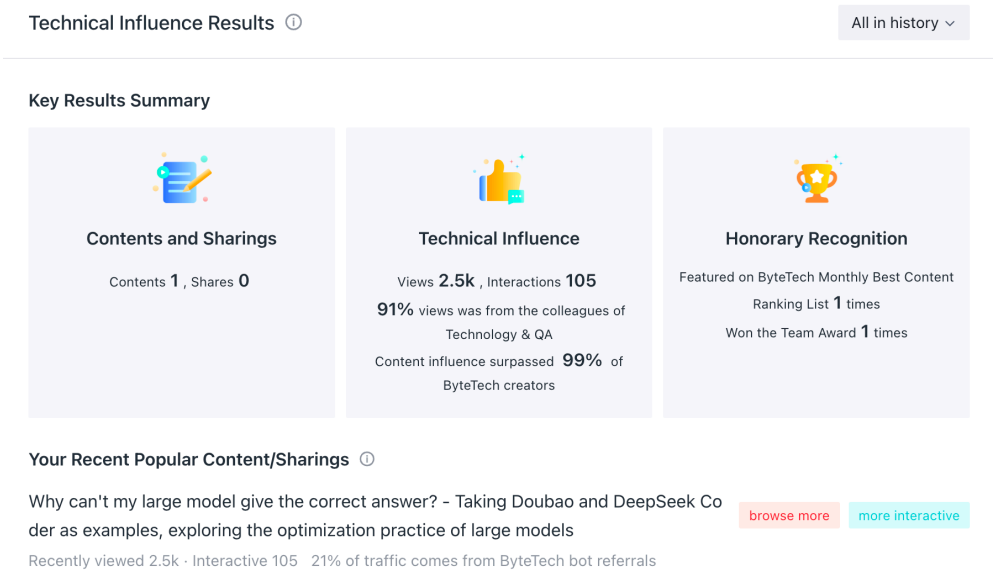
*Project Background:*
Due to the need for internal R&D testing personnel and user support staff to access specific data for troubleshooting, directly calling back-end RPC interfaces incurs high querying costs. I redesigned the internal group buying platform, enhancing capabilities such as permission management, to provide a portal tool website.

*Main Outputs:*
① Implemented a BFF layer using FaaS and related technologies, allowing the front-end to directly call FaaS interfaces, with the BFF requesting back-end RPC interfaces.
② Developed business scenarios based on the internal permission management platform, providing an RBAC-based permission management system that supports dynamic configuration of pages and permissions.
③ Developed a system for data desensitization through the internal gateway system, allowing each rule to be configured without delving into code logic.
④ Reconstructed the page visuals, referring to related visual solutions on Dribbble, to optimize user experience.

### 4. Douyin Life Services B-end Internal Large Language Model Application

*Project Background:*
Large language models are a popular research direction with certain advantages in code generation. In Douyin's B-end code development, many scenarios involve similar tasks, such as converting specific visual designs into code, and the design specifications and component libraries remain consistent. Thus, AI can be considered for code generation through relevant fine-tuning training and prompt engineering.

*Main Outputs:*
① Conducted independent research on large model-related processes and published an article internally that ranked second in popularity, with 2.5K views and 105 likes and saves. Shared this within the department, receiving widespread acclaim.
② Fine-tuned the DeepSeek Coder model and researched code generation scenarios, resulting in one VsCode plugin. Investigated Figma visual design to code generation solutions based on Langchain's Agent capabilities.




## Front-End Engineer — Jul. 2021 – Nov. 2023
## Zhejiang Fliggy Network Technology Co., Ltd. (Subsidiary of Alibaba)

### 1. Fliggy Multi-end Mini Program Business Development Project

*Project Background:*
Fliggy's WeChat mini program involves collaboration across multiple departments. The complexity of mini program development, coupled with a large codebase and extended build times, leads to high maintenance costs. Additionally, rapid responses to emergencies and timely page switch requests are necessary.

*Main Outputs:*

① Reduced build time by 50% via employing SWC to realize the dependency tree module and enhancing custom build capabilities by developing the ability of configuring sub-packages. ② Optimized the mini program's bundle size with different techniques and published an article: "The Bundle Size Optimization of Fliggy Mini Program inner Alipay"

- Used Babel compiler to process environmental variable judgment logic – reduced over 1MB.
- Extracted common dependencies and components – reduced over 2MB.

③ Authored three technical articles on the underlying principles of multi-end mini programs and conducted multiple internal sharing sessions.

**2. Fliggy Multi-end Framework Development**

*Project Background:*

Fliggy has mini programs on WeChat, Alipay, and Taobao, but different ends have similar foundational systems, such as routing and shell systems, with different implementations and capabilities. The multi-end framework aims to unify public capabilities across ends, forming a complete overall framework.

*Main Outputs:*

① Developed a multi-end routing system using TypeScript, covering URL unification, mini program page degradation, traffic customs, etc., to meet various routing needs.

② Maintained the proxy and WebView system developed based on Serverless and implemented functions such as grayscale capability testing and user information synchronization as well as opening Fliggy Mini App by using one universal QR code in multiple applications to meet the needs of collaborators

## Academic Projects

### A Brief Analysis of the Influence of Mobile Communication Devices on University Classrooms Based on Field Theory.

Graduate Project (Major) Sep. 2020 – Apr. 2021 l

- Conducted a comprehensive literature review to identify industry trends.
- Collected preliminary data through surveys to analyze university students' reasons for using electronic devices in classrooms and their course experience feedback.
- Organized interviews with teachers and students to gain insights into their perceptions of electronic device use in classrooms and uncovered their experiences related to teaching atmosphere and sentiment.
- Compiled and deeply analyzed collected materials in conjunction with field theory to summarize the conclusion for the final report.

### On-campus Online Second-hand Commodities Trading Platform Based on the MP APP.

Graduate Project (Minor) Sep. 2020 – Apr. 2021

- Conducted scenario research to understand the current state and context of on-campus second-hand trading and analyzed university students' trading needs.
- Performed needs analysis to determine the trading app's implementation strategy and specify the app's required capabilities for product posting, content display, and transactional chatting.
- Developed the app using the Flutter technology stack and Golang for server-side development, with deployment via Docker.
- Post-launch collected user feedback, conducted research and implementation of product suggestions, and addressed related issues

## Extracurricular Activities and Community Involvement

**Head of the Backend Maintenance Department** **Sep. 2017 – Apr. 2020**
**Anhui University Official WeChat Public Account**

- Managed the daily operation and maintenance of the WeChat public account's backend system.
- Built an automatic reply system and enhanced the system's capabilities by implementing a duty function.
- Designed and launched promotional pages for significant university events, such as developing a profile picture generator for students to create individual profile photo.

## Awards

**Champion at Undergraduate Group, MDA-HTML5&CSS3 Program Development Engineer Project Contest under the Mini Program Creativity and Design Competition of the 9th Cross-Strait Computer Application Ability and Information Literacy Competition for College Students and the Cross-Strait Industry Core Skills Literacy and Professional English Competition (Taipei Division).**

Awarded by: GLAD (Global Learning & Assessment Development) Aug. 2019

**First Prize at Undergraduate Group, Presentation Design Sub-contest under the Office Business Application Ability Contest of the Cross-straits College Students Computer Application Ability and Information Literacy Contest & Cross-straits Industrial Core Skills Literacy Contest**

Awarded by: Association of Fundamental Computing Education in Chinese Universities Aug. 2019

**Second Prize, the 12th Chinese College Students Computer Design Contest**

Awarded by: Chinese College Students Computer Design Contest Organizing Committee Jul. 2019

**Champion at Undergraduate Group, Applet Creation and Design Contest of the National Finals of the 9th National College Students Computer Application Ability and Information Literacy Contest**

Awarded by: Association of Fundamental Computing Education in Chinese Universities Jun. 2019

## Skills and Interests

- **Languages:** Mandarin (Native), English(Fluent)
- **Technical Skills:** JavaScript (Proficient), HTML&CSS (Proficient), React (Proficient), TypeScript (Proficient), Faas & Serverless (Proficient), Babel (Familiar), SWC (Familiar), Webpack (Familiar)
- **Hobbies and Talents:** Painting, Cooking