

# Zhiwei Li

FULL STACK ENGINEER · BACKEND ENGINEER

Guangzhou, China

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*Freedom Truth*

## Summary

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- Male, born in 1995, Chinese citizen, resides in Guangzhou. Achieved top 300 in Guangdong NOIP 2011 and solved around 1000 algorithm problems online.
- Studied for one year at Beijing Forestry University before dropping out. Pursuing an associate degree through self-taught education, with nine courses completed.
- Currently at TEKsystems (outsourced to HSBC Bank). Previous experience includes LeanCloud, Beijing Square Root, Beyondsoft (outsourced to DBS Bank), and Farben Information (outsourced to HSBC Bank).
- Accumulated 11 years of professional experience, including 8 years in corporate roles and 3 years as a freelancer. Specializes in 2 years of mobile (Android, iOS) engineering, 8 years of full-stack engineering (7 years backend, 1 year frontend), and 1 year in machine learning/big data.
- Good understanding of HTML, CSS, Browser APIs, JavaScript, Vue.js, React, Angular, and iOS/Android development. Familiar with Java, Spring, Spring Boot, MySQL, Redis, APIs, networking, containers, and distributed systems. Familiar with logging, database, and microservice modules on Alibaba Cloud, AWS, and Azure.
- Native in Chinese, proficient in English (IELTS 6). Read over 320 books spanning textbooks, personal development, business, technology and history. Read around 2000 comprehensive, long AI answers in the past year.
- Developed 10 open-source GitHub projects as a main developer, each with over 500 commits available at <https://github.com/lzwjava>. Detailed software portfolio available at <https://lzwjava.github.io/pages/portfolio-en>.
- Generous knowledge sharer with AI assistance to help fix grammar, having around 480 original posts on the blog attracting around 60,000 page views a year, and who documents a lot in the corporate environment too.
- Self-taught researcher with three academic-style papers on reversing myopia and natural vision restoration, inspired by the works of Yin Wang and Todd Becker, backed by three years of experimentation.
- Engineer with an entrepreneurial spirit and a product mindset, using 3 mobile phones and one thousand of apps and games to play with. Worked as an autonomous AI agent, proficient with extensive AI tools, and becoming better with comprehensive logging and testing.
- Life hacker in every aspect of life, with thousands of innovative practices—from bringing a second mobile device to help my daughter learn English in China, to using a car vent to dry hair; air fryer lover; has hundreds of small tools or things like a Electric/Magnetic Fields meter, etc.
- Travel lover and road trip master. Been to the USA twice around age 21, as well as Hong Kong and Macao, and most parts of China. Taken English courses online with 60 Filipino English teachers, and some African or European teachers too.

## Work Experience

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- Backend Engineer outsourced to HSBC Bank under TEKsystems, developing and optimizing backend systems for a module of the Finance Transformation Platform in HSBC's Enterprise Technology Department.
- Maintained features for financial data processing including import, validation, and export, while enhancing submission and approval workflows for new financial headers. Gained experience in accounting, ledger, and banking systems.
- Participated the full development lifecycle, from local development to UAT testing and production releases. Copilot was heavily utilized for tasks such as analyzing root causes, generating reusable Python scripts, and documenting around 500 technical guides. Some of these guides became key references for teammates facing similar challenges.
- Made myself an autonomous humanoid AI agent that automates as much as possible—through scripting, logging, documenting, and sharing. With caching and validation of LLM outputs, dedicated prompts and contexts for 20 customized or vertical agents, and 300 reusable Copilot-written scripts across the tech stack, the engineering experience in a large bank has started to feel good.
- Led integration and API testing for the module, using the Copilot API to auto-generate around 70 test cases covering Spring Filters in Java, Python unittest, JSON truncation, prompt engineering, and regional endpoints.
- Worked with technologies such as Java, Spring, IBM Db2, Maven, Nexus, Angular, and Python, along with tools including Windows, Control-M, IBM WebSphere Application Server, and Copilot.
- Joined the internal HSBC AI Community; stayed updated on AI progress after work; trained small models using Andrej Karpathy's nanoGPT; utilized OpenRouter and Claude Code for extensive coding in personal projects; consumed approximately 190 million tokens over the past year; learned MCP, LangChain, Codex, vLLM, multi-model techniques, reasoning, and more.

**Self-employed***Guangzhou, China*

FREELANCER

*Aug. 2023 - Jan. 2025*

- Analyzed and reimplemented core components of approximately 30 machine learning projects from PyTorch, TensorFlow tutorials, Coursera courses, and open-source repositories. Earned two Coursera certificates: Machine Learning Specialization and Deep Learning Specialization.
- Prepared for exams to obtain an associate degree, focusing on advanced mathematics, computer organization, and linear algebra. Studied Japanese through immersion in Japanese music and TikTok videos.
- Contributed as a Full Stack Developer to an AI-powered story bot leveraging Claude's API for personalized storytelling. Implemented prompt configuration and a management interface using Python, Flask, React, and Nginx, with deployment on AWS. Employed Prometheus for monitoring, ELK stack for log management, and ChatGPT-4 for coding support.
- Maintained a technical blog with 431 original posts at <https://lzwjava.github.io>. Utilized large language models for translation into 9 languages, text-to-speech audio, and support for PDF and EPUB formats. Integrated GitHub workflows and used LaTeX for academic papers and resume creation. Technologies included Python, Jekyll, Deepseek, and Mistral.
- Conducted experiments with llama.cpp, embeddings, rerankers, Retrieval-Augmented Generation, and the MMLU benchmark. Integrated search engine APIs, including Jina AI, Tavily AI Search API, and ElevenLabs API.

## Shenzhen Farben Information Technology Co.

Guangzhou, China

BACKEND ENGINEER

Nov. 2022 - Jul. 2023

- Farben is a leading software technology service provider in China. HSBC Bank is one of the largest banking and financial services institutions in the world. PayMe is an HSBC mobile payment service catering to Hong Kong residents.
- Contracting through Farben, assigned to work for HSBC Bank and contributed to the PayMe project. Participated in the backend development for the Auto Top Up feature, which automatically tops up funds from the user's credit or debit card when their balance falls below a certain amount. Monitored post-payment events from Azure EventHub and checked for top-ups whenever a user set up their auto top-up configuration. Used dedicated object-oriented programming to handle cases elegantly and applied aspect-oriented programming to audit logs for changes in the auto top-up table.
- Actively contributed to cloud migration following participation in the company's AWS training. Refactored APIs to utilize request header-based routing, ensured secure access and database configurations, and participated in deploying microservices to the new cloud infrastructure.
- Utilized a strong tech stack including Java, Spring, and Kafka, along with Azure, Azure DevOps, and AWS for cloud services and continuous integration.

## Beyondsoft Consulting Inc.

Guangzhou, China

BACKEND ENGINEER

Dec. 2021 - Nov. 2022

- Beyondsoft Consulting is a leading business IT and consulting company. DBS Bank is the largest bank in South-east Asia by assets and among the largest banks in Asia. Contracting with Beyondsoft, assigned to work for DBS Bank and contributed to DBS Client Connect and DBS DigiBank CN projects.
- In the DBS Client Connect project, contributed to the development of the equity trading microservice. Responsibilities included creating functionalities for equities display, customer display, pre-trade checks, and placing actual equity trade orders. Integrated Avaloq APIs to enhance the underlying infrastructure and improved the user experience by implementing an edit distance algorithm to refine stock code searches.
- In the DBS DigiBank CN project, actively contributed to the development of several microservices handling mutual funds management, structured investment products, investment portfolios, and transaction lists. Assisted with performance tests by analyzing logs from Pivotal Cloud Foundry to generate reports on the QPS of the microservices. Developed a tool to automate test generation for the testing tool Karate, streamlining the testing process and improving test coverage.
- Leveraged cloud technologies and modern frameworks, employing automation best practices with tools such as Java, Spring Cloud, Jira, Confluence, Jenkins, Pivotal Cloud Foundry, and Kibana, and utilizing BDD and TDD methodologies.

- Authored and published technical blogs to share knowledge online, improved English proficiency through engaging with Netflix and literature, and enhanced problem-solving skills by tackling around 500 algorithm problems and participating in Codeforces competitions.
- Gained a little hands-on experience with big data and cloud-native technologies by exploring introductory tutorials and running examples for Spark, Hadoop, Kubernetes, and Docker.
- Completed various software projects as a freelancer, including LED Sign Website Development, Enterprise WeChat Integration for ShowMeBug, Web Scraper for Trade Data Collection, and an eBook tool called mathjax2mobi.
- LED Sign Website Development (lvchensign.com): Developed a website for an LED sign manufacturing company using Bootstrap, HTML, and JavaScript. Implemented features for showcasing products.
- Enterprise WeChat Integration for ShowMeBug: Contributed to the integration of ShowMeBug with Enterprise WeChat, enabling seamless access to technical interview tools within the Enterprise WeChat ecosystem. Utilized technologies like Ruby, Ruby On Rails, PostgreSQL, and the WeChat SDK to create a smooth user experience for interviewers and candidates.
- Web Scraper for Trade Data Collection: Developed a web scraper using Python and Selenium to collect trade data for a non-woven fabric company. Automated data extraction and page navigation, processed and stored the data in a SQLite database, and generated reports for business analysis.
- mathjax2mobi: A tool designed to convert HTML content with MathJax equations into eBook-friendly formats. By transforming LaTeX-based MathJax equations into SVG images, it ensures compatibility with eBook formats like MOBI. Technologies used include Python, BeautifulSoup, and Selenium.

## Beijing Square Root Inc.

Beijing, China

FOUNDER & FULL STACK ENGINEER

Jul. 2016 - Dec. 2019

- Beijing Square Root Inc. ran two businesses in 3.5 years. From July 2016 to September 2017, it rolled out and operated Fun Live, a knowledge live broadcast platform. From January 2018 to December 2019, it transformed into a software consulting business.
- With Fun Live, users could participate in various knowledge lectures such as programming or design. Users could pay fees to attend live sessions or reward lecturers. The lecturer used the OBS tool to push live streams to the server. Users could participate in the lecture in real-time or see the playback later. The platform integrated seamlessly with WeChat for notifications. Hosted around 80 lectures, gained 30,000 users and millions of page views. Responsible for most software development and marketing, leveraging PHP, Vue, HTML, CodeIgniter, MySQL, Redis, LeanCloud, Alibaba Cloud, and WeChat SDK.
- During the software consulting business period, completed 50 small software projects for customers, including websites, games, and apps. The revenue was around 3 million RMB and the profit was around 700 thousand RMB. Responsible for project negotiation, team management, and some software development. Notable projects are shown below.
- MianbaoLive: Led a comprehensive backend refactoring effort for MianbaoLive, a one-stop content monetization and social economy platform. Optimized the performance, stability, and user experience of the entire tech stack. Previously used ThinkPHP, Node.js, and Go, and rewrote everything in Laravel for server-side development. The platform included modules for courses, users, content, user attendance, payments, and distribution sales. Partnered with Himalaya, a top audio platform in China, and synchronized content between the platforms.
- Jiangsu TV's Super Brain Program WeChat Mini Program: Responsible for all backend development and half of the frontend development for the Super Brain program's WeChat Mini Program. Engaged viewers with interactive puzzle games, enabling them to compete and rank to become the "Super Brain." Used the WeChat Mini Program framework and Wepy (Vue.js) to create game components and ranking pages. Integrated RESTful APIs to fetch game data and user information. Performed extensive performance tuning to ensure the system could handle high concurrency, leveraging caching technologies such as Redis.
- Chongding Conference: Spearheaded full-stack engineering for Chongding Conference, a mobile trivia app in China resembling HQ Trivia. Designed and implemented services and APIs to handle live trivia events, user management, and real-time question and answer sessions. Utilized Java and Spring for the backend, with Redis and Kafka for caching and message queuing, Zookeeper for service coordination, and Socket.IO for real-time interactions. Developed the admin panel to help operators control the game. The app supported live streaming, real-time interaction, and robust performance under high traffic conditions. Contributed to technical discussions for using SEI (Supplemental Enhancement Information) to synchronize the timestamp of the live streaming with the trivia game interactions.

## Beijing Dami Entertainment Co.

Beijing, China

COFOUNDER & FULL STACK ENGINEER

Nov. 2015 - Jul. 2016

- Beijing Dami Entertainment Co. was a company founded by 6 Internet enthusiasts, including me. Launched and operated the platform CodeReview, a professional platform for code review, communication, and sharing. Gained around 3,000 users.
- The platform included functionalities such as user management, code submission and review processes, notification systems, payment integration, and event and workshop management. Engineers could submit their code for expert review to improve its quality, and experts received fees for their reviews. The platform also offered workshops and events open to users.
- Responsible for the development of the backend and half of the frontend. Utilized a strong tech stack including PHP, Vue, CodeIgniter, Alibaba Cloud, and Ping++.

## Delicious Bookmarks (Beijing) Information Technology Co., Ltd.

Beijing, China

SOFTWARE ENGINEER

Jul. 2014 - Nov. 2015

- Delicious Bookmarks is a leading cloud computing provider in China, known as LeanCloud. It offers a complete set of cloud services including object storage, file storage, web hosting, containers, instant messaging, push notifications, SMS, and game backends. The company serves hundreds of thousands of developer users.
- Participated in the development of LeanCloud Objective-C SDK and Java SDK. Responsible for the development of LeanChat iOS client and Android client, a chat application designed to demonstrate the instant messaging SDK. Additionally, worked on various frontend projects.
- Employed a robust tech stack, leveraging modern tools such as iOS SDK, Android SDK, Cocoapods, Xcode, Android Studio, and the Angular framework.

## Education

### Guangdong University of Foreign Studies

Guangzhou, China

ASSOCIATE DEGREE IN COMPUTER APPLICATION (ONGOING)

Oct. 2022 - Present

- National Higher Education Self-study Examination. Passed 9 courses: Introduction to Operating Systems, Introduction to Data Structures, Advanced Language Programming (I), English (I), Advanced Mathematics, Database and Applications, Computer Application Technology, Introduction to Law, and Computer Organization and Architecture.
- Currently preparing for 7 courses: Computer Networks, Basic Electronic Technology (III), Microcomputer and Interface Technology, College Chinese, Mao Zedong Thought and Theory of Socialism with Chinese Characteristics, Ideological and Moral Cultivation and Rule of Law, and Linear Algebra.

### Beijing Forestry University

Beijing, China

BACHELOR'S IN DIGITAL MEDIA ARTS (INCOMPLETE)

Sep. 2013 - Jun. 2014

- Completed 13 courses, including Computer Introduction, Fundamentals of Programming, Programming Fundamentals Lab, College English, Advanced Mathematics, Principles and Techniques of Digital Imaging, and Two-Dimensional Graphics Technology.
- Built a campus assistant Android application Bifu Assistant, integrating grade checking and alumni forums, with thousands of downloads on campus. Also created an Android app for learning English through movie clips, winning third prize in a hackathon.
- Ranked top 1 in my school's ACM/ICPC monthly training competition among around 100 top students, including higher-grade peers.
- Awarded third prize in the "Youth, Health, New Media" digital works creativity contest organized by UNESCO and the Communication University of China for the digital work "Mom Shy To Say."

### Guangzhou Yuyan Middle School

Guangzhou, China

MIDDLE SCHOOL DIPLOMA IN SCIENCE

Jul. 2007 - Jun. 2013

- Ranked in the top 300 out of 100k students in the Guangzhou High School Entrance exam.
- Ranked in the top 300 in the 2011 Guangdong NOIP (National Olympiad in Informatics in Provinces).

## Corporate Projects

## Full Stack Development, Backend Development, Platform Integration, Team Management

VARIOUS CORPORATE PROJECTS

2014 - 2024

- HSBC Finance Transformation Platform (2025.02 - Present) Participated in backend development, utilizing tech stacks like Java, Spring, Python, IBM WebSphere, and Copilot.
- AI-powered Story Bot: Full stack development using Claude's API for personalized stories. Technologies: Python, Flask, React, AWS. (May 2024 - Jul. 2024)
- PayMe from HSBC: Backend development for Auto Top Up feature and cloud migration. Technologies: Java, Spring Cloud, Azure, AWS. (Nov. 2022 - Jul. 2023)
- DBS Digibank CN: Backend development for mutual funds microservices. Technologies: Java, Spring Cloud, Pivotal Cloud Foundry. (Jul. 2022 - Nov. 2022)
- DBS Client Connect: Backend development for equity trading microservices. Technologies: Java, Spring Cloud, Pivotal Cloud Foundry. (Dec. 2021 - Jun. 2022)
- ShowMeBug: Platform integration with Enterprise WeChat, including login and interview entrance. Technologies: Ruby on Rails, PostgreSQL, WeChat SDK. (Jul. 2021 - Sep. 2021)
- Square Root Inc Projects: Led 50 projects including websites, games, apps, and WeChat mini programs. Responsibilities included team management, contract negotiation, project management, client communications, and software development. (Jan. 2018 - Dec. 2019)
- Super Brain TV Program WeChat Mini Program: Backend and frontend development for the TV show's WeChat Mini Program. Technologies: Java, Spring, JavaScript, HTML, AliCloud. (Feb. 2018 - Mar. 2018)
- Chongding Conference: Backend and frontend development for live-streaming trivia app. Technologies: Java, Spring, WebSocket, Netty. (Sep. 2017 - Jan. 2018)
- Mianbao Live: Backend refactoring for a content monetization platform. Technologies: PHP, TypeScript, Laravel, Go. (Sep. 2017 - Jan. 2018)
- Fun Live: Full stack development for a knowledge live broadcast platform. Technologies: PHP, JavaScript, HTML, AliCloud, RTMP Streaming. (Jun. 2016 - Sep. 2017)
- LeanCloud SDK and LeanChat: Development of Objective-C and Java SDKs and their demo app LeanChat. (Jul. 2014 - Oct. 2015)

## Personal Projects

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## Open Source Contributions, Blog Development, Backend and Frontend Development, Mobile App Development, Tool Development

VARIOUS PERSONAL PROJECTS

2013 - Present

- Algorithm Solutions: Solutions to algorithm problems, hosted on GitHub with 2466 commits, implemented primarily in Java. (2013 - Present)
- Personal Blog: Maintained a bilingual blog (English and Chinese) with 500 commits, sharing insights on programming, technology, and personal development. (2013 - Present)
- Live Server: Backend development of a knowledge live broadcast platform using PHP with 660 commits. (2016 - 2017)
- Live Mobile Web: Developed the mobile frontend of a knowledge live broadcast platform using Vue and JavaScript with 528 commits. (2016 - 2017)
- Live Web: Developed the desktop frontend of a knowledge live broadcast platform using Vue with 140 commits. (2016 - 2017)
- Live WeChat Mini Program: Developed the WeChat Mini Program for a knowledge live broadcast platform using JavaScript with 63 commits. (2016 - 2017)
- Code Review Server: Developed the backend for a professional platform for code review using PHP with 275 commits. (2015 - 2016)
- Code Review Web: Developed the frontend for a professional platform for code review using Vue and JavaScript with 302 commits. (2015 - 2016)
- LeanChat iOS: Developed an iOS chat application demonstrating LeanCloud SDK, implemented in Objective-C with 556 commits. (2014 - 2015)
- LeanChat Android: Developed an Android chat application demonstrating LeanCloud SDK, implemented in Java with 412 commits. (2014 - 2015)
- Feynman Lectures Mobi: Developed a tool to convert LaTeX to SVG for creating mobi ebooks, implemented in Python with 47 commits. (2020 - 2021)

## Blog Posts

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Below is a selection of my blog posts, covering personal growth stories, startup journeys, English learning, programming, geek projects, and more.



## SELECTED BLOG POSTS

- Building a Scalable Application on Azure
- Comprehensive Guide to Spring Framework
- Build an AI-Powered Story Bot with Flask, React, and ELK
- End-to-End Trace ID Implementation
- Deploying with Pivotal Cloud Foundry
- The Wisdom of Learning
- Zen and the Art of Machine Learning
- How to Build a Computer
- Introduction to Web Programming
- Practical: Scraping Website Content
- Mastering English: On and Off the Job
- Turning Feynman's Lectures on Physics Webpages into an eBook
- Setting Up Live Streaming with OBS, SRS, and FFmpeg
- Liewunwang: Post-95 Entrepreneur Founded Knowledge Live Streaming Platform QuZhibo
- Enhancing iOS Development with Automated Testing and Tools
- My Trip to the United States: First Impressions of Silicon Valley
- Advanced Git Operations and Principles
- Porting FFmpeg to Android

## Papers

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I'm a self-taught researcher with three academic-style papers on reversing myopia and natural vision restoration, inspired by the works of Yin Wang and Todd Becker, supported by three years of experimentation. In computer science, I am still striving to make similar breakthroughs.

### Experimental Verification of the Natural Vision Restoration Method

*Zhiwei's Blog*

LI, ZHIWEI

*Jun. 2023*

- Discussed experiments validating a natural vision restoration method.
- Published online: <http://lzwjava.github.io/vision-restoration-en>

### The Discussion Regarding Astigmatism When the Eyeballs Reverse to the Normal Shape

*Zhiwei's Blog*

LI, ZHIWEI

*Jun. 2023*

- Analyzed the relationship between astigmatism and the reversal of eyeball shape to normal.
- Published online: <https://lzwjava.github.io/astigmatism-en>

### Natural Vision Restoration: The Principle of Just Barely Clear

*Zhiwei's Blog*

LI, ZHIWEI

*Nov. 2024*

- Explored the concept of just barely clear as a guiding principle for natural vision restoration.
- Published online: <https://lzwjava.github.io/barely-clear-en>

## Books Read

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I have read over 320 books spanning textbooks, personal development, business, technology and history. Below are key books and resources that have shaped my thinking.

## BOOKS READ

- Beginning Algorithm Contests by Rujia Liu
- Steve Jobs by Walter Isaacson
- Treat Time as a Friend by Xiaolai Li
- The 7 Habits of Highly Effective People by Stephen R. Covey
- Sapiens: A Brief History of Humankind by Yuval Noah Harari
- Computer Systems: A Programmer's Perspective by Randal E. Bryant and David R. O'Hallaron
- Yin Wang's Blog by Yin Wang (<https://yinwang.org>)
- Paul Graham's Essays by Paul Graham (<http://paulgraham.com>)

## Skills

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- 5+ Years of Experience: Chinese, English, Writing, Java, Algorithm, Test-driven Development, Cloud Computing, DevOps, Backend Development
- 3-4 Years of Experience: Cantonese, iOS Development, Android Development
- 1-2 Years of Experience: Product Management, Machine Learning, Frontend Development
- Less than 1 Year of Experience: Japanese

## Tools

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Below are detailed tools that help me to accumulate the above skills, plus other interesting tools. I am still using some of them and can learn for a few days to use the rest of them again.

- Natural Language: English, Chinese, Cantonese, Hakka, Japanese
- Operating System: Linux, Windows, MacOS, Android, iOS, OpenWRT
- Programming Language: PHP, Java, Objective-C, Swift, Ruby, HTML, C, C++, JavaScript, Lisp, Clojure, TypeScript, Node.js, Go, Python, Pascal
- Java: JDK 8/17, Spring MVC/Core, SLF4J, Jackson, Hibernate, JaCoCo, FeignClient, XML, Reflections, Servlet, Executor
- Python: 3.8/3.11, Flask, logging, json, SQLAlchemy, unittest, requests, xml.etree, inspect, http.server, concurrent.futures
- Domain-specific language: JSON, CSS, SQL, NoSQL, Kusto Query Language, Kibana Query Language
- Database: MySQL, SQLite, PostgreSQL, Microsoft SQL Server, Amazon RDS, MongoDB, IBM Db2, Navicat
- Database Client: Squirrel SQL Client, DBeaver, MySQL Workbench, Sequel Pro, Navicat, Eclipse Data Source Explorer
- Frontend: Vue, React, Angular, jQuery, Hexo, Jekyll, Stylus, Sass, Chrome, Safari
- Framework: RTMP streaming, HTTP/IP, Spring, Spring Boot, Hibernate, Netty, Codelgniter, Laravel, Flask, Express, Socket.IO, iOS SDK, Android SDK, Flutter
- Big Data: Redis, Kafka, Spark, Flink, ZooKeeper
- Math: Calculus, Linear Algebra, Discrete mathematics, Latex
- IDE: Emacs, IntelliJ IDEA, Visual Studio Code, Xcode, Android Studio, Eclipse, PyCharm, PhpStorm, Sublime Text, Atom, WebStorm, Delphi, Turbo Pascal
- Terminal: Powershell, Command Prompt, iTerm2, GNOME Terminal, Terminal (macOS)
- Development: NPM, Webpack, Git, HomeBrew, Gradle, Maven, Sketch, Cocopods, WordPress, YourKit Java Profiler
- CI/CD: Travis CI, GitHub Actions, Jenkins, Azure DevOps, Control-M
- Monitoring: SonarQube, Prometheus, Elasticsearch, Logstash, Kibana, Nginx, Docker, Kubernetes
- Machine Learning: TensorFlow, PyTorch, Theano, Anaconda, Jupyter Notebook, CUDA, Numpy, Pandas
- Cloud: GitHub, GitLab, Digital Ocean, Vultr, AWS, Azure, Google Cloud Platform, Linode, Alibaba Cloud, Qiniu Cloud, Tencent Cloud, LeanCloud, Firebase, Cloudflare, GoDaddy, Agora, Vercel
- Application Runtime: IBM WebSphere Liberty Server, IBM WebSphere Application Server, Pivotal Cloud Foundry, PM2
- Project: Jira, Confluence, ServiceNow, Trello, Microsoft To Do, Tower.im
- Large Language Model: OpenAI, Claude, MiniMax, Amazon Bedrock, Copilot, LangChain, vLLM, llama.cpp, OpenRouter, Claude Code, Codex, Copilot API, Claude Code Router
- Linux: nmap, grep, awk, ffmpeg, htop, df, lsof, strace, tcpdump, iostat, iptables, rsync, journalctl, systemctl, curl, tmux, traceroute, emacs, diff
- Testing: Postman, Selenium, Karate, JUnit, Spring Boot Starter Test, Mockito, Apache JMeter, Apache ab, Playwright, Python unittest
- Hardware: Arduino UNO, Raspberry Pi Pico

## Knowledge

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Below is a summary of my expertise and knowledge domains. While I have a solid understanding of some topics and a more basic familiarity with others, I would be happy to share more in an interview if you are interested in any specific areas.

#### INDUSTRY KNOWLEDGE

- Banking and Payments, Education and E-learning Platforms, Social Media and Content Platforms, User and Account Management, Notification Systems, Data and Analytics, Mobile Applications, Payment Systems, Transaction Management, Social Media Integration, Video Management, Reward Systems, Live View Tracking, Application Management, Mutual Funds and Equity Trading, Browser-Based Programming Environments.

#### COMPUTER SCIENCE FUNDAMENTALS

- Advanced Mathematics, Computer Organization, Operating Systems, Computer Network Technology, Database and Applications, Computer Application Technology, Data Structures and Algorithms, Microcomputer and Interface Technology.

#### TECHNOLOGY AND DEVELOPMENT

- Multilingual Communication, Cross-Platform Development, Full-Stack Programming, Database Management, Machine Learning and Big Data, Mathematical Proficiency, Development Tools, Machine Learning Implementation, Advanced Linux Usage, Testing and Quality Assurance, API Integration, Open Source Contributions, Technical Writing and Blogging, Cloud Computing Services, Distributed Systems, High Performance Optimization, Realtime Application, RTMP Streaming.
- Continuous Integration/Continuous Deployment (CI/CD), Containerization and Orchestration, Network Security, Agile Methodologies, Software Architecture, DevOps Practices, Cloud-Native Applications, API Development, Version Control Systems, Serverless Computing, Performance Monitoring, Data Engineering, Security Best Practices, Software Development Lifecycle (SDLC), Technical Mentoring, Project Management.

## **Entrepreneurial Spirit and Product Mindset**\_\_\_\_\_

- Founded two startups: one with co-founders, and one created by myself. The latter gained 30k users and once achieved revenue of 3 million CNY a year.
- Secured an investment of around half a million CNY in my startup at 22 years old, and returned it to the investor when shutting down.
- Applied to Y Combinator twice. One time, entered the second round with around a 3% acceptance rate, though didn't make it into the batch.
- Like to initiate new ideas in big companies to actually help the project; tried many ways and created proofs-of-concept in local development in some code branches. Presented them to tech leads to move things forward. Some received good feedback.
- Gained a lot of social media influencing practice, including blogging, WeChat Subscription channel, TikTok, WeChat Videos, Weibo and LinkedIn. Acquired thousands of followers or 60k page views a year.
- Used 3 mobile phones and thousands of apps and games to experiment with, including different kinds of apps from tens of countries.
- As an early user of Blue Sky, I commented on Jeff Dean's first post here and got a like from him; he is Google's Chief Scientist.
- Own hundreds of small tools and gadgets, such as an Electric/Magnetic Fields meter, etc.
- If things or products are cheap, very willing to buy different kinds to compare and understand their nuances.
- Read around 100 books about business, management, and product. Have some connections with people who are experts in these areas.
- As a crypto and US stock investor since 2018, I took a break due to some losses but resumed investing in 2024, using long-term and regular investing practices. Despite the modest amount, I am pleased to have gained a 25% profit from NVIDIA after one year of regular investing as of July 2025, as well as a 30% profit from some of my Bitcoin investments.

## Certificates

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- 2014 **Beijing Forestry University Dropout Certificate**, Beijing Forestry University
- 2014 **China Higher Education Official Report (Bachelor Education, Dropout Status)**, China Higher Education Bureau
- 2022 **IELTS Academics, Score 6**, British Council
- 2023 **Machine Learning Specialization Course Completion Certificate**, DeepLearning.AI and Stanford University
- 2023 **Deep Learning Specialization Course Completion Certificate**, DeepLearning.AI
- 2023 **Developing on AWS**, AWS Training

## Links

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- **GitHub:** <https://github.com/lzwjava>
- **Blog:** <https://lzwjava.github.io>
- **Codeforces:** <https://codeforces.com/profile/lzwjava>
- **UVa Online Judge:** <https://uhunt.onlinejudge.org/id/113519>
- **Kaggle:** <https://www.kaggle.com/lzwjava>
- **LinkedIn:** <https://www.linkedin.com/in/lzwjava>