





Tong Zhou

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EDUCATION

- ♦ **University of Southern California**
- ♦ Master of Science in Electrical and Computer Engineering Mar 2021-Dec 2022

Northern Arizona University

- ♦ Bachelor of Engineering in Computer Engineering Sep 2019-May2020

Chongqing University of Posts and Telecommunications

- ♦ Bachelor of Engineering in Electronic Information Engineering Sep 2016-Jul 2019

PUBLICATION

- ♦ T. Zhou and C. Huang, "UAV Automatic Docking Technology Based on Deep Learning," 2020 International Conference on Computing and Data Science (CDS), Stanford, CA, 2020

PROFESSIONAL EXPRERENCE

CTO & Full-Stack Engineer | *TBBID: AI-Driven Bidding Data Analysis System* www.tbbid.top **Mar 2025 – Present**

Led the end-to-end design and development of TBBID, an intelligent bidding data analysis platform tailored for the construction industry, addressing pain points in information fragmentation, lack of analytics, and unscientific bidding strategies.

- ♦ **Architected a full-stack data intelligence system**, covering the entire data lifecycle from large-scale web scraping, ETL pipelines, PostgreSQL warehousing, RESTful API services, to React 18 front-end visualization.
- ♦ **Built a distributed Scrapy-based crawler cluster** with anti-bot mechanisms, supporting high-concurrency scraping from multiple official bidding platforms; collected over **10,000 records daily**, managing **5M+ structured entries**.
- ♦ **Designed Django RESTful API backend**, implementing token-based auth, fuzzy search, multi-level filters, and paginated endpoints with an average **response time under 200ms**, ensuring high scalability and maintainability.
- ♦ **Developed a modern React 18 front-end** with modular UI, responsive layout, and ECharts-based visualizations; implemented smart search, company profiling, and bid analysis dashboards, increasing user efficiency by **30%+**.
- ♦ **Optimized relational data models** for complex queries and real-time analytics, enabling **multi-dimensional visualizations** of win rates, bidding strategies, and performance trends across companies and projects.
- ♦ **Introduced CI/CD pipelines**, Dockerized deployment, and integrated unit + interface testing, ensuring **99.9% uptime** and reducing release errors by over 50%.

CTO & Full-Stack Engineer | *Trace Hotel Management Ltd.*

Oct 2024 – Present

As the CTO, led the overall IT infrastructure, system integration, and digital transformation initiatives across 15+ hotel branches, aligning technology development with business expansion, cost reduction, and service quality improvement.

- ♦ **Led the evaluation and integration of a third-party PMS**, and connected it with the in-house mini-program, cashier system, and OTA (e.g., Meituan, Ctrip) channels; **increased order conversion rate by 30%**, and ensured stable high-concurrency operations across all stores.
- ♦ **Independently developed a data backup consistency verification module** to enhance the reliability and integrity of management-level backups, effectively preventing data loss, exposure, or corruption.
- ♦ **Built a unified BI reporting platform** aggregating key financial metrics including store revenue, refund rate, and user ratings; implemented an **automated anomaly detection system** that proactively sends alerts via **DingTalk group bots**, enabling the operations team to intercept **100+ financial risks** in advance.
- ♦ **Designed and deployed a gamified employee incentive platform**, inspired by the “League of Legends” tier system; created a structured reward system based on performance KPIs, store rankings, and task completion. As a result, **average store-level positive review rates improved by 22%**, and employee engagement and service consistency significantly increased.

Huawei | Software Engineer | C++, Python, Shell , CDP, Huawei Private Cloud

Apr 2023 – Sep 2024

A core developer in Huawei's **Continue Data protection** development team, participating in and leading the development of multiple versions of the product's data storage backup and host disaster recovery features.

- ♦ Accomplished **millisecond** file-level recovery at any point in time under continuous data protection technology, disk recovery function development, support mainstream Linux, Windows disk format.
- ♦ Independently completed a data backup software management data backup **consistency** verification function, to **prevent** management data backup **exposure** and **codification**.
- ♦ **Reconfigured the microservice communication framework** within the product to enable more secure two-way authenticated encrypted communication between microservices.
- ♦ Independently completed **4** tools, which improved the efficiency of the team's work, over **500** times usage.

LightInTheBox | Recommendation Algorithm Engineer

Aug 2020 – Dec 2020

Effectively participated in the development of efficient algorithms while assisting in the development of an image search system and a **recommendation system** for the www.lightinthebox.com shopping site.

- ♦ An image search engine is constructed by extracting image latent features using **VGG-16** and storing vectors using **Milvus**.
- ♦ Utilize product images stored in **Amazon S3**, batch process all images and update weekly.

SKILLS

- ♦ **Programming languages:** C++, Java, Python, JavaScript, Swift
- ♦ **Web Technology:** Django, Node.JS, Express.JS, Flask, Vue, React, Angular, CSS, HTML, GCP, AWS, MongoDB
- ♦ **Operating system:** Windows, Linux