

# Tingjun Liu

Phone: +1 3149349814      **LinkedIn:** [linkedin.com/in/tingjun-liu-2a541127b](https://www.linkedin.com/in/tingjun-liu-2a541127b)  
Website: [www.dijkstraliu.com](http://www.dijkstraliu.com)      **Email:** [dijkstra20031023@gmail.com](mailto:dijkstra20031023@gmail.com)

## SUMMARY

Seeking **Software Engineer Intern** starting from **2024 Summer**: Experienced in full-stack, web, and game development using tools like **React**, **Spring Boot**, **Flask**, and languages such as **PHP**, **JavaScript**, **Java**, **C++**, **Python**. Knowledgeable in machine learning with **TensorFlow/PyTorch** and models like **CNN**, **RNN**, **Transformer**. Proficient with **LangChain** and **GPT API** applications.

## EDUCATION

**Washington University in St. Louis** August 2022 - May 2026  
Bachelor of Science in Computer Science **GPA 4.0/4.0**

## TECHNICAL SKILLS:

**Languages:** Java, C++, Python, PHP, JavaScript, C#      **Frameworks and Libraries:** React, Spring Boot, Flask, Django, Node.js, Express  
**Databases:** MongoDB, MySQL, Milvus      **Machine Learning Models:** CNN, RNN, Transformer  
**Tools and Platforms:** Git, TensorFlow, PyTorch, GPT API, Docker, AWS, LangChain

## WORKING EXPERIENCE:

**Cogno Technology (GPT API, Flask, Docker, Milvus, AWS)** July 2023 - Now  
*Software Developer*

- WeChat Bot Development:** Implemented a bot using the Chroma database, GPT API, and Langchain to respond to user messages, including documents, audio, and images. Currently providing customer service for 30+ e-commerce sellers.
- Framework & API Development:** Created an encapsulation framework with Flask, GPT Cache, OpenAI API, ensuring separation of business operations from core logic. Migrated the previous Cogno business logic to new framework.
- E-commerce Platform:** Developed a standalone e-commerce platform leveraging LLM customer service and Milvus-assisted product search. Utilized Flask, MySQL for backend design, development, and troubleshooting. Deployment carried out on AWS through Docker.

**DHC Software Co., Ltd (Django, React)** May 2023 - July 2023  
*Software Development Intern in Financial Big Data Technology Department*

- Platform Creation:** Developed a user credit assessment and anti-money laundering platform using React, used by three banks to judge user creditworthiness and potential money laundering suspicions based on transaction records.
- Backend Development & Designing:** Designed and established the backend, using Django to handle frontend requests and interactions with the LLM API. Implemented GPTCache to reduce API call costs by 30%. The API has had over 50,000 calls.
- Model Training:** Employed P-tuning to train ChatGLM-6B, allowing it to perform credit assessments based on bank data.

## PROJECT EXPERIENCE:

**Bill Split: Team Expense Manager (MongoDB, Node.js, React)** Mar 2023 - May 2023

- Developed a user-friendly interface with **React** for efficient team expense tracking and management.
- Implemented a graph theory algorithm to streamline and simplify the transaction process among team members.
- Built backend operations with **Node.js** and **Express**, including APIs for adding, retrieving, modifying, and deleting expenses.
- Designed a **MongoDB** schema for optimal storage and querying of expense data.
- Employed **Git** for version control and deployed using **Docker** for consistent environments.

**WashU Internal Second-hand Goods Trading Platform (Spring Boot, React, Project Design)** July 2023 - Sep 2023

- Led the design and development of WashU's internal second-hand trading platform, serving students and faculty.
- Crafted a **React**-based interface and backend services with **Spring Boot**.
- Introduced the **GPT API** to enhance user shopping experiences through intelligent product insights and providing users with tailored product suggestions.
- Continuously updated and optimized platform features based on user feedback and changing requirements, ensuring the platform's relevance and efficiency.

**Team Event Management System Similar to Google Calendar (PHP, AJAX, HTML, MySQL)** Apr 2023 - May 2023

- Developed key functionalities using **PHP**, **JavaScript**, **HTML**, and **AJAX**, such as event addition and team joining to view collective events.
- Executed core event management logic, encompassing the addition, deletion, and modification of events.
- Crafted a **MySQL** database structure to securely store user data and event details.

**Storm Watch: A multi-player 2D RPG shooting game (C#, Unity)** June 2023 - Sep 2023

- Spearheaded the development of "Storm Watch," a multi-player 2D RPG shooting game using **Unity** and **C#**.
- Took the helm in game design, conceptualizing and detailing the game's narrative, characters, and setting to create a compelling backdrop for the gameplay.
- Implemented **local area network (LAN)** multiplayer capabilities, permitting players to team up or combat in real-time.
- Designed and integrated character skill effects, enriching gameplay dynamics.
- Actively gathered and implemented player feedback, continuously refining the game for an optimal experience.

## HONORS AND AWARDS

- Distinction Rank (Top 5%) in 2021 AMC 12A Dec 2021
- 1st Place in Gold Division (out of 723 participants) of the USACO Contest Jan 2020
- Top 2% of 148,880 students, National Olympiad in Informatics in Province (NOIP) May 2019
- Dean's List at Washington University in St. Louis for all semesters. June 2023