TINGJUN LIU

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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 **Java**, **C++**, **Python, PHP**, **JavaScript**. 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, Docker)   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 300+ students and faculty.
- Crafted a **React**-based secondhand trading system and message system, 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.

Recoil Raiders: A multi-player 2D RPG shooting game (C#, Unity)   June 2023 - Sep 2023
- Spearheaded the development of "Recoil Raiders," 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