YUEXI SUN

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HIGHLIGHTS OF Professional Summary

- *Seeking a 4-16 months co-op as a 3rd year student, expected graduation in April, 2027*
- *As SDE Intern @ China Telecom, Developed a real-time urban traffic signal microservice system using Spring Cloud and Redis, following Agile Development processes*
- *Developed a full-stack AI Q&A system with Spring boot and React using JWT for secure role-based authentication, deployed on AWS for scalability*
- *Built a sentiment analysis system comparing NLTK-based and Transformer-based NLP model on real-world Amazon reviews*
- *Demonstrated strong Communication and Problem-Solving as a leader of 4 members by developing "Train Pathfinding Visualizer" a tool for finding optimal path in train station with A* algorithm*
- *Currently building a personal website with Next.js and TypeScript to show strong passion for new potential tech stacks*
- ***My Personal Website URL**: Phoenix Web*

- Tech Stack: Proficient in **Coding**:*(Java, TypeScript, JavaScript, Python, C, SQL),*
  ***Framework**:(Spring Boot, Next.js, Node.js, React, Tailwind, Bootstrap, Material-UI, Hibernate, Mybatis-Plus, Prisma)*, ***Cloud&DevOps**:(Spring Cloud, Vercel, Google Cloud (App Engine), AWS, Docker, Jenkins, Nacos)*,
  Databases: *(MySQL, PostgreSQL, MongoDB)*, ***Tools**:(Redis, Git, Linux/Shell, Postman, Web Scraping, Chrome Extensions, RabbitMQ, Dom, Logback, SLF4J, NLTK, Pytorch, Playwright, Pandas, Unity Engine)*

EDUCATION

Bachelor of Honours Computer Science---------- Sep 2022 - Present
McMaster University, Hamilton, ON ***GPA:11.0/12.0 --- 3.9/4.0***
Relevant courses: Database(*A+*), Computer Architecture(*A+*), Software development(*A+*), Data structure & Algorithm(*A*)

WORK EXPERIENCE

China Telecom (Intelligent Security Technology, Chongqing, Yuzhong District, China)---------- May 2024 – Aug 2024
Position: Software Development Engineer Intern

- Implemented traffic signal backend microservice systems with *Springboot* and *SpringCloud* for urban traffic management, developing real-time monitoring of 100+ city intersections with live data storage/analyzing and map-based control with pre-scheme controlling functions
- Designed MySQL schema with Snowflake ID for distributed systems, using *Mybatis-plus-Join*'s QueryWrapper for dynamic queries for improving system scalability and reabdability.
- Integrated *Swagger 3.0* for API documentation and applied Spring Boot Validation for user input, securing leaking data with *Nexus*-hosted encrypted Jackson utilities for request/response
- Accelerated deployment by implementing CI/CD using *Jenkins and Kubernetes* with Automated build test
- Implemented *Redis* for caching and session-based access control, using optimistic locking with version numbers to ensure data consistency in traffic signal scheme management.
- Implemented reusable generic BaseController class for common CRUD operations and implemented custom AOP logging with *Logback and SLF4J*, generating time-stamped logs to enhance debugging

PROJECT EXPERIENCE

NLP-Based Sentiment Analysis for Amazon Text-Review ---------- Jan 2025 — Apr 2025

- Developed a sentiment classification system using Natural Language Processing (NLP) to analyze emotional tone in real-world Amazon product review datasets, comparing the accuracy results from NLTK-based VADER models and transformer-based RoBERTa models within *500k+ product reviews*.
- Built a data scraper using *Playwright* (Python) to extract dynamically rendered Amazon reviews from JavaScript-heavy web pages to search missing data with preventing runtime interruption ability

- Customized a Hugging Face Transformer-based RoBERTa with PyTorch to extract contextual logits and convert them to interpretable sentiment scores via softmax post-processing.
- Designed a unified evaluation pipeline to align and compare VADER and RoBERTa sentiment outputs to visualize model behavior such as *confidence and correlation* using Seaborn pair plot
- Leveraged Pandas, tqdm, and matplotlib, combined with outlier handling strategies to improve evaluation

TraceMyself Tracking System ---------- May 2025 — Present

- Built a full-stack personal knowledge-tracking platform with *Next.js and TypeScript* to document my computer-science history, including features such as clear pagination with sorting, searchable categories, progress tagging
- Implemented secure, role-based authentication and session management with *NextAuth.js*.
- Built a dynamic, time-aware UI system with auto-theming and physics-based animations using *Tailwind with Framer Motion*, featuring real-time theme previews and cinematic transitions
- Integrated *Prisma with MYSQL* to model data relationships and ensure type-safe database interactions.
- Optimized web performance by implementing lazy loading, image compression, etc. in Next.js.
- Deploying to *Vercel* Cloud Server: *Phoenix Web* (Application is still in Progress…)

AI Q&A System: full-stack web app development---------- 2023 – 2024

- Build Register and Login *REST APIs* using *Spring Security* and *JWT* to implement Role-Based Authorization
- Designed style Web Pages and interactive chat components with *Material-UI* to achieve user-friendly UI
- Integrated ChatGPT API to automatically respond by gathering data from Web Dom using *web scraping*
- Automated ChatGPT responses by combining answers from Web Dom using free ChatGPT usage limits with auto-login Chrome extension Json script instead of Paid API
- New Feature: Developed context-aware chat by storing & retrieving conversation history from *MySQL*

User Management Distributed System ----------May 2024 — Aug 2024

- Implemented *Spring Cloud Gateway* with *Nacos* for service discovery, designing custom filters for *JWT-based* authentication and role-based access control (RBAC).
- Integrated Redis for implementing Kaptcha filter to store Google Kaptcha codes and JWT tokens, enabling stateless session management and high-frequency request caching
- Developed RBAC modules using *MyBatis-Plus*, with AOP interceptors for dynamic permission validation across distributed services.
- Unified API responses and error logging via *AOP*, streamlining debugging and standardizing *DTO* structures.
- Containerized Jar, Nacos and MySQL with Docker, using Nginx for reverse proxy and load-balanced routing

Train Pathfinding Visualizer(School Team Project) ---------- Winter 2024

- Developed comparative pathfinding analyzer implementing *A* (with heuristic function) vs Dijkstra's algorithms*, improving 35% runtime speed compared with Dijkstra's algorithm
- Processed real-world London Underground dataset with adaptive graph weighting
- Visualized performance metrics (time/space complexity) using *Matplotlib* across 45,000+ station pairs