Yu WenYa

**Career Objective: Software Engineering**

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Education Background

2019.09-2023.06 Hefei University of Technology Software Engineering (B.E.)

* Grades and Ranking: 91.02/100 (Ranking 5/169)
* Awards and Honors: National Scholarship, First-Class University Scholarship, Outstanding Student Award, Third Prize in National Computer Design Competition

2023.08-2024.07 Nanyang Technological University Computer Science(MSBT )

* Research in NTU CSLab Monitoring and Alerting of Underlying Trading Risks by Large Language Models(LLMS)

Internship Experience

2021.12-2022.02 USTC GUOCHUANG CLOUD Technology Co.,Ltd Java Developer

* **Achievement**: Obtained the software copyright for "Intelligent Enterprise Financial Reimbursement System" (First Author).
* **VAT Invoice OCR Recognition**: Implemented invoice OCR recognition and automatic entry using YOLOv3 + CRNN + CTC.
* **Microservices Architecture:** Implemented microservices architecture using Spring Cloud and utilized gRPC to invoke the Invoice Center interface built with the Flask framework.
* **Authentication and Authorization**: Utilized JWT for authentication and authorization, achieving stateless authentication on the server side.
* **Preventing Cache Avalanche**: Implemented distributed mutual exclusion locks using Redis to prevent cache avalanches.

Project Experience(SOFTWARE )

**2023.03-2023.06 Online Video Playback System Golang Back-end Developer**

* **Stability of Distributed System Microservices Architecture**:Successfully keeping RPC Error Rate below 3%, through Consul and GRPC for service registration and discovery, combined with the weighted round-robin algorithm to optimize load balancing for the online video system.
* **System Metrics Monitoring and Alerting**:Monitored server status using Prometheus,Grafana and Altermanager.After Post-Load Testing through Jmeter, performance bottleneck analysis is employed with ELK log recording and PPROF flame graphs for performance bottleneck analysis.
* **High Concurrency and High Performance**:Achieved an interface QPS of over 1500 by using Redis, establishing DB Index and Read-write separation,Server Scale Out with Kubernetes,and a pagination query to optimize the slow-query video list interface.
* **Continuous Integration/Continuous Deployment**:Compressing the entire process from Code Changes to Deployment into a 2-minute timeline by implementing CI/CD using Docker and Github Action.
* **Project Link**: [Offer Maker](http://175.178.59.92:8081/login)

Project Experience(AI)

2023.08-2023.12 Blockchain Transaction Risk Monitoring Based on LLM NTU CSLAB

* **Summary:**To precisely track on-chain risks, we employ the advanced LLM (LLaMA2) language model for text embedding and use a Graph-Transformer for deep semantic analysis. This method both categorizes and scores transaction risks.
* **Fine-Tuning** **LLM:**By fine-tuning the LLM language model, we enhanced its ability to semantically map transaction text.
* **Optimize prompts with GOT**:Using the latest Prompt Optimization Technology (GOT), we significantly improved the quality of text fed into the large model.
* **Training Adoptor for semantic mapping of transactions:**By combining GNN and Transformers, we enhanced the model's understanding of transactions through precise semantic mapping.

2022.03-2022.12 AI Text-to-Video Generator Virtual Reality AI-Lab In HFUT

* **Summary** :This optimized TransCGAN algorithm quickly generates custom action videos from text and excels in performance and industrial potential.
* **New DL Model**: The published TransCGAN model successfully integrates CGAN and Transformer, specifically designed for high-quality human action generation. The model has achieved industry-leading standards in both speed and quality, demonstrating excellent potential for industrial applications.
* **Outcome** :**EI Paper** 《[TransCGan-based human motion generator](https://www.spiedigitallibrary.org/conference-proceedings-of-spie/12566/125662W/TransCGan-based-human-motion-generator/10.1117/12.2668277.short?SSO=1)》(**First Author**)
* **Detail link**: https://yushen611.github.io/post/about-research

**2023.03-2023.06 Web SQL Injection ML-Detector AI-Lab In HFUT**

* **The world's best Machine Learning SQL injection detector**：Applied word2vec model with positional encoding for query string vectorization, followed by one-dimensional convolution to reduce noise in sentence vectors. Trained a random forest model, achieving 97% accuracy. Outperformed 'libinjection' (78% accuracy) and TF-IDF with SVD (90% accuracy).
* **Faster computational speed**:Compared to deep learning (DL), machine learning (ML) can be computed using just a CPU, resulting in faster processing speeds.More practical in industrial applications.
* **Collecting the world's largest SQL Injection datase**
  + <https://www.kaggle.com/datasets/gambleryu/biggest-sql-injection-dataset>
* **Docker image**
  + **Java Rule-Based version**:<https://hub.docker.com/r/88759863/sqli-detector-java>
  + **ML-Based version**:<https://hub.docker.com/r/88759863/sqli-detector-python>

Key Skills(SOFTWARE)

* **Summary**:**Golang Backend**,**Distributed System**,**DevOps**,**High-performance Software**
* Language skills:IELTS score of 6.5
* Development Language:Go,Python,Java,C++
* Development Framework:GIN,GORM,Spring Cloud,Spring Boot
* Database:MySQL, ClickHouse
* Middleware:Consul,GRPC,Redis,RocketMQ,Prometheus,Grafana,Altermanager,EKL
* Operations:Linux,CI/CD,Docker,Kubernetes

Key Skills(AI)

* **Summary**:**DL & ML , NLP , Fine-Tuning** **LLM**
* Language skills:IELTS score of 6.5
* Development Language:Go,Python,Java,C++
* AI: Pytorch ,Opencv,LLAMA2,Transformer,GAN

Key Skills(BC)

* **Summary**:**BlockChain**,**Golang Backend**,**Distributed System**,,**High-performance Software**
* Language skills:IELTS score of 6.5
* Development Language:Solidity,Go,Python,Java,C++,javas
* Development Framework:Web3.js,HardHat,GIN,GORM,Spring Cloud,Spring Boot
* Database:MySQL, ClickHouse
* Middleware:IPFS,Consul,GRPC,Redis,RocketMQ,Prometheus,Grafana,Altermanager,EKL
* Operations:linux,CI/CD,Docker,Kubernetes

Thesis && Patent && Software Copyright

* **Thesis :TransCGAN-based Human Motion Generator, International Conference on Computer Information Science and Artificial Intelligence** *First Author, 08.2022*
* **SC:Intelligent Financial Reimbursement System, No. 2022SRO576160** *First Author, 03.2022*
* **SC:Beichite Cloud Customized Printing System , No. 2022SRO758646** *First Author, 03.2022*
* **Patent :A Wireless Torque Sensor, No.202210304204.9** *Second Inventor, 06.2022*
* **Patent :A Walking Aid Stick, No. 202010166261.6** *Second Inventor, 05.2020*