Yeshuai Cui

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CAREER

Citi   **London, Unitied Kingdom**
Software Engineer   09/2023-

- **BE Engineer**: Implemented **RestAPI** Endpoints using **Java SpringBoot** and **JDBC**, implemented **Oracle SQL** Consumption layer **tables** & **Materialized Views** for data querying. Primarily developed the **distributed caching layer** using **Couchbase**, including custom solutions for data refreshing, eviction, and concurrency control to efficiently handle parallel database read/write operations. This improves response time by 10x. Introduced Key Design Decisions to ensure **time consistency** across FE & BE.
- **FE Engineer**: Implemented webpage components using **React**, handling **data fetching** / data mocking, **state management** of highly correlated states. Optimized development and testing efficiency by **encapsulating** common utility code, reducing redundancy by 5x.

EDUCATION

Imperial College London   **London, United Kingdom**
MSc Advanced Computing, Distinction   09/2022 – 09/2023

King's College London   **London, United Kingdom**
BSc Computer Science, First-Class Honours   09/2019 – 06/2022

EXTRACURRICULAR EXPERIENCE

Microsoft   **Suzhou, China**
Software Engineer Intern, Bing   09/2021 – 09/2021

- Conducted **data processing/feature analysis** using Aether pipeline, wrote Scope(**SQL**-like) and **C#** code to Evaluated [MEB model.](link)
- **Trained the model** to give even scores for documents from different time and discovered possible reason for the tier gap: feature coverage difference across tiers.

Google
Google Summer of Code, Cloud Native Computing Foundation   06/2021 – 09/2021

- Joined and contributed to **KubeVela**, a modern application platform that makes it easier and faster to deliver and manage applications across hybrid, **multi-cloud** environments.
- Contribution mainly revolved around **Rollout Controller**, which was used in Rollout Plan and Rollout Traits (canary update).

PROJECTS

Load-Aware L4 Load Balancing for Microservices and Cloud Native Systems:
                          C, Golang, eBPF, Linux, Networking, Kubernetes, bash
Utilized Cilium CNI/eBPF and Kubernetes Service abstraction to develop a centralized L4 Load Balancer, preventing IO bottlenecks. Idea: https://marioskogias.github.io/docs/crab.pdf

Deep Learning Projects: **Python, Pytorch, LLM, Text Generation, Computer Vision**
Developed DCGAN, VAE generative models using Pytorch. (link)
Performed age regression from Brain MRI using segmentation, volume feature, and regression / CNN. (link)
Developed discriminative language classifiers using BoW, DeBERTa-Base, and BERT. Improved performance through keyword pre-processing and ensemble methods (Bagging, Voting). (link)
Implemented DP, MC, TD agents for a maze environment, and DQN/DDQN agents for pole balancing in reinforcement learning. (link)
Programming Languages: Python, Java, C++, C, Go, C#, Ruby, Haskell, Scala, SQL, HTML, JavaScript
Skills: Software Development, Database Systems, Distributed Systems, Artificial Intelligence