SHAO-KAI CHEN

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 https://github.com/justin0u0

 https://blog.justin0u0.com

EDUCATION

National Tsing Hua University   *September 2018 - June 2022*
Bachelor's degree. Department of Computer Science.
- **Overall GPA**: 3.91/4.3

WORK EXPERIENCE

Dcard   *July 2021 - Present*
Web Backend Intern
- Implement poll posting features with good performance in Dcard forum, with over millions of members.
- Implement new matching algorithm using Dinic's algorithm for the Dcard matching feature.

9Dynamics   *Augest 2019 - June 2021*
Backend Engineer and DevOps Engineer
- Design microservices architecture with Golang and NodeJS to build a map-based social software.
- Design RESTful APIs for client and gRPC for inter-service communication.
- Applied different databases for different services or workloads, including PostgreSQL, MongoDB, Neo4j, Redis and ElasticSearch.
- Achieve automated CI/CD on Gitlab CI with code quality assurance, unit testing, docker image build and deployment on Google Kubernetes Engine.
- Deploy services on Kubernetes to achieve reliability(Deployment) and scalability(HorizontalPodAutoScaler).

NTHU Introduction of Programming Course TA   *January 2019 - June 2020*
- Design programming assignments and tests for over 120 students.
 https://justin0u0.notion.site/I2P-TA-ee1172974056423e9f37829d6537f60b

NTHU Operating System Course TA   *September 2021 - January 2022*
- Design Pthreads producer-consumer assigments for over 130 students.
- Answers questions about NachOS assignments including system call, memory management, CPU scheduling and file system design.

PROJECTS

AI Platform on Kubernetes for Automated ML Pipeline Development and Operations
- MLOps with integration of Kubeflow pipeline, Jupyter Notebook, Tensorboard and Prometheus.
- The platform provides datasets and model (docker image) sharing with ACL control.
- The platform provides compute resource sharing with multi-tenancy.
- I am responsible for the architecture design, backend development, Kubernetes resource controller implementation and deployment in this project.

Hermes Routing Strategy Improvement
 https://github.com/justin0u0/NTHU-Database-Final-Project
- Improve the routing strategy of Hermes Distributed Database to achieve higher throughput of transactions.
- I am responsible for all improvement design and development in this project.
- Got **best implementation** and **best presentation** award in the NTHU Introduction to Database System course.

InfoLife
 https://infolife.justin0u0.com
 https://github.com/justin0u0/info-life-server / https://github.com/justin0u0/info-life-platform
- A posting and Q/A platform that supports Markdown and syntax highlight.
- Deploy on AWS EC2 (but closed now).
- I am responsible for all backend development, all server deployment and 1/4 frontend development in this project.
- Got **third prize** in the NTHU Software Studio course.

AWARDS

- 2020 ICPC World Finals Invitational Contest **Rank 22**.
- 2019 ICPC Asia Pacific Taipei-Hsinchu Regional Contest **4th-Place**.
- 2019 ICPC Asia Kuala Lumpur Regional Contest **7th Place**.
- 2018 ICPC Asia Singapore Regional Contest **6th Place**.

TECHNICAL SKILLS

Programming:	C, C++, Javascript, Go, SQL, Python, Java
Software & Tools:	**Backend Framework:** Express.js, Koa, Gin, Go Micro
	Frontend Framework: VueJS, NuxtJS
	Cloud Service: GCP(GKE, Cloud SQL, GCS), AWS(EC2, S3), Cloudflare, Firebase
	Database: MySQL, PostgreSQL, MongoDB, Neo4j, Redis, ElasticSearch
	Message Queue System: RabbitMQ, NATS
	Container Orchestration: Docker, Kubernetes
	Testing Framework: Jest(NodeJS), Ginkgo(Golang)
	CI/CD: GitlabCI (with Kubernetes executor), CircleCI

EXTRACURRICULAR

Design Data-Intensive Application Study Group   *July 2021 - Present*
- Read and study the book "Design Data-Intensive Application".
- Self learning topics about distributed system including replication, partition, distributed transaction and consensus.

LeetCode Study Group - Leader   *February 2021 - June 2021*
- Leading a 16 students LeetCode study group.
- Select 6 problems every 2 weeks by topics and explain the idea, thinking process and implementation of those problems.
⚭ https://justin0u0.notion.site/LeetCode-57d3fc3c39714bf7b37429a590a85824

Meichu Hackathon Development Team - Leader   *March 2020 - Octobor 2020*
- Leading a 8 students team to develop the main website and registration website for Meichu Hackathon.
- Use NuxtJS for frontend development and Moleculer (NodeJS microservices framework) for backend development.
- Host the website on Firebase and deploy the server on AWS EC2 using docker.
⚭ https://2020.meichuhackathon.org/