Johnny **Chang**

BACKEND ENGINEER

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"Anything worth doing is and will be incredibly hard."

Summary

Web developer with 6+ years of prior experience, specializing in backend developement. Have done a variety of work from simple content serving websites to modern C10K live streaming platform. Experienced simple development flows and more sophisticated flows. Always looking for challenges to face, problems to solve, and chances to learn new technical skills/tools. Hopes to bulid rock solid backend services that serve content to millions of people worldwide per day someday.

Skills

Languages	Python
DevOps	Docker, Kubernetes, Github Actions, GCP, Linux, Shell Scripting
Backend	Flask, MongoDB, Redis, Django (REST framework), PostgreSQL, Celery, RabbitMQ, Redis, Elasticsearch, Memcached
Languages	Chinese, American English

Experience

SWAG — *Taipei, Taiwan*

BACKEND MANAGER — *Aug 2023 - Present*
- Managed day to day feature developments/bug triages/emergencies for the backend team with a team size of 7.
- Improved team development and debug velocity by hiring and enabling members.
- Reduced cloud costs by 20% by application optimizations and leveraging sensible discounts.
- Implemented infrastructure for monitoring/alerts/on-call for SLA/SLO/SLI.
- Increased stability of low latency live streaming with WebRTC + flv.

SENIOR BACKEND ENGINEER — *Jan 2022 - Aug 2023*
- Led assigned feature developments from start to finish.
- Decreased latency of livestreams from 12 seconds to 2 seconds with in-house LLDASH.
- Implemented in-house VoD encoding with various DRM systems (Fairplay/Widevine/PlayReady).

BACKEND ENGINEER — *Jun 2020 - Jan 2022*
- Maintained/Developed features on a Flask based live streaming service.
- Developed client-server realtime communication with extensive usage of websockets.
- Hands on experience with video content encoding/encrypting pipelines. Also optimized the pipeline for efficiency and latency.
- Gained basic knowledge of live content delivery through rtmp stream endpoints.

Unnotech — *Taipei, Taiwan*

BACKEND ENGINEER — *Jun. 2019 - Jun. 2020*
- Maintained/Developed features of several Django microservices in a team of 15 engineers.
- Designed and implemented low-latency odds synchronization/limiting system with Celery. It finishes in less than 30 seconds despite the complex business logic and the vast amount of values (72k+) that would need to be adjusted in a singular operation.
- Built and deployed a microservice that issues interest to users every minute. Can serve 10k active users with very basic resources.
- Refactored ancient code that was written when better options were not available (eg: bulk_update in Django ORM)
- Learned how to deploy Kubernetes microservices on GKE using Helm.
- Optimized 50+ slow endpoints with various techniques such as profiling, object prefetching, algorithm rewrites, migrating data types...etc

Pi Softwares — *Kaohsiung, Taiwan*

WEB DEVELOPER — *Mar. 2018 - May. 2019*
- Designed, implemented and deployed several websites in Python with Django.
- Built fully automated CI/CD pipeline with self hosted git server and DroneCI for code updates. Reduced deployment time by 70%
- Built and depolyed a highly scalable distributed web crawling system with Scrapy, Ansible and a bunch of single board computers.
- Implemented data ETL pipeline with Kafka, BeautifulSoup, SQLAlchemy.
- Automated boring daily chores (SSL certificate renew, daily database backups) by combining shell scripts and cron jobs.
- Implemented in-site search mechanism with Elasticsearch and fine-tuned it for Chinese.

Education

National Dong Hwa University — *Hualien, Taiwan*

B.S. IN COMPUTER SCIENCE AND INFORMATION ENGINEERING — *Sept. 2013 - June. 2017*