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Julian Lin

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Education

University of Illinois at Urbana-Champaign - M.Eng., Electrical and Computer Engineering   Champaign, IL 2021 -
National Taiwan University - M.S. & B.S., Mechanical Engineering   Taipei, Taiwan 2013 - 2019

Work Experience

Backend Software Engineer - OpenNet. ltd   2020. Oct - 2021. Jun
A technical support company focusing on developing a world-class online betting system.   Taipei, Taiwan
- **System Performance, Stability, and Security Team:** (JAVA, SpringBoot, AWS, Redis, MySQL, Docker)
  ● Improved system performance and stability by 30% by separating Redis read/write, refactoring inefficient SQLs, refactored faulty cron job center, and added Shedlock to prevent jobs retriggering.
  ● Reduced crucial error alerts by 90% by refactoring the error codes handler and implementing slack notification.
- **Customer Support System Team:** (SpringSecurity, AWS RDS, Firebase, JUnit, Mockito)
  ● Developed customer support SaaS backend(https://www.pleased.com), which provided customers with admin pages and SDK to send and receive chat, email on their website using firebase and SendGrid.
  ● Built 40+ visualized metrics, analytics, and summary tables for agent efficiency and performance statistics.
  ● Refactor inefficient analytic SQLs and improve performance by 5 times.
  ● Led a team to redesign a more efficient data pipeline and ETL system structure.
  ● Implemented load-distribution algorithm and chat reassignment mechanism to spread support agent load.
  ● Reviewed security scan reports and proposed fixes for the severe vulnerability.
  ● Wrote unit tests and integration tests in Mockito and JUnit to ensure 100% test coverage for new features.

Side Projects

Taiwanramen.club (taiwanramen.club)   2020. Jun - Present
- A community geo-based website focused on providing information for ramen lovers in Taiwan.
- Frontend:
  ● Built modern react app using functional components, Context API, and typescript to ensure type-safe at runtime.
  ● Switch from customer-side to server-side rendering using Next.js to improve render speed and user experience.
  ● Implemented responsive Metro map, world map, and geolocation search using image-map and Mapbox API.
  ● Achieved WYSIWYG rich text editor which allows users to type in formatted reviews by using QuillJS.
- Backend:
  ● Built Node app using Express and secure API endpoints using Facebook oauth2, JWT, and cookies.
  ● Persist data using MongoDB and achieve transactions by setting up replica sets.
  ● Optimized fast geolocation search feature by implementing geohash and Uber H3 geo-indexing system.
  ● Optimized latency by 50% by using Redis as caching layer and adding indexes to MongoDB
- WebScraper:
  ● Crawled 500+ ramen stores information from Google map using puppeteer, headless chrome, and parsed wanted info using regex.
  ● Prevented detection by adding random user-agent, referrer, proxy, timeout, and ghost mouse movements.
- DevOps:
  ● Implement CI/CD using CircleCI and GitHub Actions and set up domain, namespace, and DNS for FE/BE.
  ● Setup local environment and replica set using docker-compose.
  ● Setup VPS Linux machine provided by Vultr and set up SSL certificates through let's encrypt.
  ● Deployed Docker container using Dokku and implemented monitoring Prometheus, Grafana, Loki, and cAdvisor.

Technical Skills

BE: REST-ful APIs, Spring MVC, Spring Boot, Spring Security, myBatis, Spring Data JPA, Hibernate, Spring Cloud, Mockito, Assertj, JUnit, Node.js, ExpressJS, PassportJS, Puppeteer, Swagger, web-scraping, data-parsing, cookies
DB: MySQL, MongoDB, Redis, Postgresql, FireBase | **FE:** ReactJs, ContextAPI, NextJs, HTML5, CSS, TypeScript
DevOps: Docker, Kubernetes, AWS(RDS/ElasticCache/CodeCommit/CodeBuild/ECR/S3), Rancher, CircleCi, DroneCI, Github Actions, Dokku, Grafana, Prometheus, Loki, VPS(Vultr), Netlify, DNS, SSL(Let's Encrypt)
Language: JAVA, JavaScript, Python, C++ | **Others:** Postman, TDD, Regex, Server send event, WebSocket, OOP