Siou-Jhih Guo

Site Reliability Engineer

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Work Experience

Microsoft
Dublin, Ireland

Software Engineer
Jul. 2022 - Present

- Worked on migrating existing Microsoft internal translation system based on .Net 4.5 to new architecture based on .Net 6 and Azure Function. It's expected to have better extensibility and scalability for new features and throughput.
- Designed and standardized unit tests of new translation system based on MSTest data-driven attributes, which expected to reduce 10-20% development time and 20-30% duplicated code.

Microsoft
Dublin, Ireland

Site Reliability Engineer
Nov. 2022 - Jul. 2023

- Operated Microsoft internal translation system. Troubleshoot and fix issues of system or submitted documents, which reduced 15-40% time on addressing and responding problems.
- Developed automation tools to automate log/metric collection and solve issues via Microsoft PowerAutomation and Powershell, which reduced 10-50% human interaction time.
- Designed and analyze metrics to help SREs and SWEs discover issues earlier, which reduced 10-60% of issue detection time.

Yellobrick Data
London, England

DevOps Engineer
Oct. 2021 - Nov. 2022

- Mainly worked on cloud native data lake product(AWS/Azure/GCP-based)'s internal pipelines and pipeline/tooling platforms.
- Worked on CI/CD pipelines(Jenkins-based, involves Python/Bash Shell/Terraform/Ansible scripts) for building/testing/deployment jobs automation. Saved 20-30% times for developers and operation engineers on related routines.
- Designed and constructed logging solution(Loki/Grafana/K8S-based) to replace legacy log storage/browsing approach. Saved support and operation engineers 50-70% times on log collecting/analyzing task. Also reduced about 40% bug-fix/issue addressing time.
- Designed and constructed Python based client library/CLI-tool for programmatically interacting with cloud product. Saved customers and internal engineer teams 30-80% time on infrastructure management.
- Designed and constructed internal metric backend(Django based) and dashboard(Grafana based). Helped engineer teams to track and optimize product related artifacts and internal costs. Also constructed Slackbot(bolt based) for costs related notification. Reduced about 5-15% costs on cloud related platform.
- Surveyed and designed next generation CI/CD pipeline platform to replace Jenkins. Constructed prototypes on Argo, Tekton, Screwdriver and Circle CI. Helped engineer teams to understand pros and cons, and choose Argo based solution in the end.
- Designed and implemented authentication solution for M2M scenario(AWS secret manager and Nginx based). Secured internal tools on clouds which out of corp-network VPN's scope. Pipelines could interact with these internal services securely.

Amazon Web Service(AWS) EMEA SARL(Irish Branch)
Dublin, Ireland

Cloud Support Engineer
May. 2021 - Aug. 2021

- In addition to Support Engineer's responsibility, also helped build Mandarin Support team in Ireland from scratch, which reduced about 30% of on-call work time for Support Engineer in Taipei and SEA region.
- Developed internal tools based on Django(Python)/Nginx/MySQL/ECS, which reduced 30-40% workload for manager and engineers.

Amazon Web Service(AWS) Taiwan
Taipei, Taiwan

Cloud Support Engineer
Aug. 2019 - Apr. 2021

- Worked for Deployment profile, which was responsible for helping customers solve questions about container and deployment related AWS services. Including: Amazon Elastic Container Service(Amazon ECS), Amazon Elastic Kubernetes Service (Amazon EKS), AWS App Mesh(AWS hosted Envoy control plane), AWS Code-series services(AWS CodeCommit, AWS CodeBuild, AWS CodeDeploy, AWS CodePipeline), AWS Infrastructure as code services(AWS CloudFormation, AWS CDK), AWS X-Ray(AWS hosted tracing service) and AWS Batch.
- Saved 35%-65% times for users who have general guidance issues, such as how to set up AWS services, write minimal sample code to work with AWS services, construct prototype, or troubleshoot configurations.
- For critical issues which caused AWS service down or break service functionality, with my work, 20%-55% time could be saved for users who looked for workaround/solutions. Besides, if the problem involved bugs in AWS service side, I could save 15%-40% time for AWS developer team on tracing code or figuring out conditions to reproduce issues to solve bugs.
- Under some circumstances, problems were caused by network connectivity/OS performance issues, or open source projects' source code/configuration. With my wild range of different troubleshooting skills and knowledge, 20%-60% time could be saved for users encounter these kind of issues.
- Having great communication skills to cooperate with customers to save them 50%-75% time on figuring out real problems for their issues, and finding most suitable solutions for them.

IChen Corp.

Taipei, Taiwan

Software Engineer

Sep. 2015 - Feb. 2017

- Designed and constructed FreeSwitch 1.6 based VoIP communication solution for parking lots intercom system. Also developed embedded VoIP client based on Raspberry Pi and Python/C-Language. The system replaced phone based solution and saved 60% costs.
- Designed and developed self-serve system for parking lots which allowed customers to park vehicles and pay by license plates without human parking officers. It reduced users and parking lot managers/clerks 60% of time on paying and verifying.
- Designed and developed self-serve system for restaurants which allows customers ordering and paying without human receptionist. It reduced users and clerks 60% of time on paying and verifying.
- Constructed and managed infrastructures(GCP and OpenVPN) and CD-chain(GitLab and Ansible based) for accounting and Customer Relation Management(CRM) server for self-serve system of parking lots and restaurants. It reduced 55% of IT cost, 30% service downtime and 55% service releasing cycle time.

Tamkung University(TKU)

New Taipei City, Taiwan

Teaching Assistant

Jan. 2017 - Jan. 2019

- Developed a Spark Cluster management solution based on Django and Docker(Docker Swarm). It allowed students to quickly construct Spark cluster in containers on Web-GUI in 1 clicks. The system freed students from learning and constructing Spark cluster, which made them focus on development related tasks. Also saved 95% of costs for school(the system was constructed on deprecated hardware).
- Constructed and maintained Hadoop cluster based on HDP(Hortonworks Data Platform) and Ansible. The system freed students and teachers from learning and constructing Hadoop cluster, which made them focus on develpment related tasks.

Tamkung University(TKU)

New Taipei City, Taiwan

Private Cloud Maintainer

Aug. 2013 - Jun. 2016

- Constructed an OpenStack (Kilo) based solution as private cloud. It replaced VMWare-based virtualization solution and reduced 50% IT costs. The system involved the following components: Nova(computing), Glance(image), Horizon(dashboard)and Keystone(identity). In addition, Network solution was Openstack Legacy Network based.

Education

TKU (Tamkung University)

New Taipei City, Taiwan

M.ENG. in Computer Science and Information Engineering

Jan. 2017 - Jan. 2019

- Master Thesis: Let Machine Read Candlestick Charts Like Human Beings - Forecast trend of stock/future price by analyze candlestick charts. Comparing performance between traditional approaches and deep learning based solutions such as Convolutional Neural Network(CNN) and Recurrent Neural Network(RNN).

TKU (Tamkung University)

New Taipei City, Taiwan

B.ENG. in Computer Science and Information Engineering

Sep. 2012 - Jun. 2016

- Graduation Project : VoIP over SDN(Software Defined Network) - A project to demonstrate flow-control ability of SDN which could improve performance of network-sensitive applications, and the network application for demonstration was a VoIP application. In the project, I constructed network infrastructure by Floodlight and OpenvSwitch 1.6 which based on OpenFlow 1.3.

Writing

Hallblazzar : Developer's Journal

Medium

Founder & Writer

Mar. 2018 - PRESENT

- Link: https://medium.com/@hallblazzar
- Recorded progress and solutions of encountered problems during development.
- Impressions and notes of newly learned knowledge and technologies.

Predicting the price movement from candlestick charts: a CNN-based approach

IJAHUC

Chih-Chieh Hung, Ying-Ju Chen, Siou Jhih Guo, Fu-Chun Hsu

2020

- International Journal of Ad Hoc and Ubiquitous Computing (IJAHUC), Vol. 34

Deep Candlestick Predictor : A Framework Toward Forecasting the Price Movement from Candlestick Charts

Taipei, Taiwan

Siou Jhih Guo, Chih-Chieh Hung, and Fu-Chun Hsu

Dec. 26th-28th 2018

- PAAP'18 - The 2018International Symposium on Parallel Architectures, Algorithms and Programming

Let Machine Read Candlestick Charts Like Human Beings

Yokohama, Japan

Siou Jhih Guo, Chih-Chieh Hung, and Fu-Chun Hsu

Nov. 12th-14th 2018

- IDAA 2018 - International Workshop of Intelligent Data Analytics and Applications, Joint with JSAI International Symposia on AI

Language Skill

Mandarin

Native

- Writing: native / Speaking: native / Reading: native / Listening: native

English

Intermediate

- Writing: intermediate / Speaking: conversational / Reading: intermediate / Listening: intermediate