CUONG T. DONG-SI

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Github: https://github.com/tdongsi Website: http://tdongsi.github.io/

Skills

Languages:	Java, C/C++, Go, Python, Scala, Groovy, JavaScript, Perl, Bash.
Java stack:	IntelliJ, Eclipse, Spring, Grails, Jacoco, JUnit/TestNG, Maven, Gradle.
Python stack:	PyCharm, Jupyter, JupyterHub, Numpy, Matplotlib, Flask, Django.
Web stack:	NodeJS, Grunt, npm, Jasmine, Mocha, HTML, CSS.
OS & Platforms:	Windows, Mac OS, CentOS, Ubuntu, Kubernetes, Amazon Web Services.
Database:	Cassandra, HBase, SQLite, MySQL, SQL.
Big Data:	Hadoop, Hive, Kafka, Vertica, Data Warehouse.
DevOps & Tools:	Jenkins, ArgoCD, Spinnaker, Docker, Splunk, Promethus, Grafana, Terraform, Pulumi, Git, Github, JIRA, Trello, Slack.

Honors & Awards

- **IoT Rock Star Award** [April 2017]: for delivering a scalable CI/CD system used in Salesforce IoT.
- **Winner - Best Idea** [August 2016]: Member of winning team for Best Idea in Intuit Data Hackathon.
- **Intuit Spotlight Awards** [March 2015, August 2015, June 2016]: for "Learn Fast" and "Deliver Awesome".
- **IEEE ICRA Travel Award** [2012], by **National Science Foundation**.
- **IEEE ICRA Travel Award** [2011], by **IEEE Robotics and Automation Society**.
- **Dean's Distinguished Fellowship** [2009], by **University of California, Riverside**.
- **Singapore Scholarship** [2002-06], full tuition & allowance scholarship for top ASEAN undergraduates.
- **Dean's List**, Faculty of Engineering, National University of Singapore [2002-04].

Recent Work Experience

Senior Software Engineer, Apple Inc. 07/2018 - present

- Work in DevOps team which is responsible for managing infrastructure, environments, and product releases for Apple News & Stocks & Weather.

Recent Projects and Achievements:

- Key contributor for migration of various backend services for Apple News/Stocks to **Kubernetes**: implemented proof of concepts (PoC) with various integrations with other Apple internal services, including Docker image builds, logging, metrics. Designed and implemented **Kustomize** plugins for YAML templating and secrets management. Designed and implemented Kubernetes RBAC for access control and team authorization. Contributed to our Kubernetes monitoring solutions including highly available **Prometheus**, **AlertManager**, **Grafana** setups and prototype Grafana dashboards.
- Regularly demoed and presented various Kubernetes features with internal and external teamsto help with Kubernetes onboarding. Recommended the teams on various Kubernetes best practices and design decisions.
- Designed and implemented CI/CD solutions for deployment to Kubernetes, including containerized, highly scalable **Jenkins** and **ArgoCD** setups. Completed with integration with internal **Github OAuth** for authentication/authorization, **Grafana** dashboards for Jenkins and ArgoCD monitoring. Developed Jenkins shared library for **GitOps** implementations with Jenkins and ArgoCD.
- Initiated, designed and lead the effort to migrate release runbooks from error-prone Quip-based runbooks to **Jupyter**-based runbooks. The runbooks are highly automated and easily extended for generating **Splunk** queries, posting Slack updates, leading to significantly reduced deployment time in product launches.
- Designed and implemented various Python commands and tools to simplify interaction with internal Apple services and APIs, complementing Jupyter runbooks. Designed and implemented simple **Kubernetes operators** and Go-based services for supporting Kubernetes operations.

Senior Member of Technical Staff, Salesforce 10/2016 - 07/2018

- Worked on various services and components for CI/CD solutions in Salesforce IoT. Designed and implemented solid CI/CD platform as the foundation for launching IoT Explorer into production.
- Built a robust, highly-available **Kubernetes** infrastructure on top of internal Compute services (similar to AWS EC2, EBS, S3). Integrated with **Prometheus** and **Heapster**-enabled Dashboard for monitoring.
- Designed and implemented **fully containerized Jenkins systems** running on Kubernetes, integrated with other systems and services such as Github/GHE, DockerHub, Artifactory, Nexus, Slack, PagerDuty.
- Implemented various key features such as Docker images, access control, Jacoco-based code coverage gates, Slack/email notifications. Contributed extensively to shared Groovy library for Jenkins to reduce code

duplication and ease Jenkins pipeline configuration for developers. Built solutions and infrastructure to speed up front-end development (Dockerized headless browser, PhantomJS).

- Designed and implemented web services for continuously syncing Github/GHE commits to GUS, integrating HBase schema upgrade to Perforce, and posting to Chatter on build successes.

Software Engineer II, Intuit Inc. 12/2014 - 10/2016

- Designed and implemented automation frameworks and tools for **Big Data** projects for QuickBooks Online and Small Business Group (SBG) ecosystem. Worked with business analysts and data scientists on project requirements to develop appropriate tools and automation solutions.
- Designed and implemented a test automation framework to facilitate automated unit/functional testing of **SQL scripts**, verifying Extract-Transform-Load (**ETL**) processes between data sources (e.g., Netezza, Hive, HDFS, Vertica), and validating data consistency and integrity.
- Member of team "Ahab" that won **Intuit Data Hackathon**: Using Docker containers to recreate data warehouse infrastructure and pipelines in local environment for efficient ETL development and testing.
- Three **Intuit Spotlight Awards** for demonstrating Intuit Values: "Learn Fast" and "Deliver Awesome".

Software Engineer, Objectivity Inc. 7/2012 - 12/2014

- Designed and implemented automation frameworks to facilitate scalable testing for company's database products, Objectivity/DB and InfiniteGraph.
- Designed and developed an automated test suite for testing Java byte code injection tools, including a custom Java parser (based on ANLTR) to verify correctness of decompiled byte codes after injection.
- Developed functional tests for Talend data connectors in ETL pipelines for transforming data from MySQL and Cassandra databases to Objectivity databases.

Research Software Engineer, National University of Singapore 8/2006 - 7/2009

- Worked in driverless car projects, a collaboration effort of multiple Singaporean industrial research labs, managed by Defense Science Organization (DSO), Singapore.
- Designed, implemented and evaluated computer vision algorithms for visual sensor modules. Designed and implemented an adaptive machine learning algorithm to identify drivable road surface from stereo images, by building statistical models of road appearance.

Education

Master of Science, University of California, Riverside. **GPA**: 3.92/4
Bachelor of Engineering, National University of Singapore, Singapore. **GPA**: 4.42/5