

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, Groovy, JavaScript, Perl, Bash.
Java stack: IntelliJ, Eclipse, Spring, Grails, Jacoco, JUnit, TestNG, Spock, Gradle, Maven.
Python stack: PyCharm, Jupyter, JupyterHub, Numpy, Matplotlib, Flask, Django.
Web stack: NodeJS, Grunt, npm, Jasmine, Mocha, HTML, CSS.
Cloud: AWS, GCP, Kubernetes, Docker, Helm, Kustomize, Terraform, Pulumi.
DevOps: Jenkins, ArgoCD, Spinnaker, Splunk, Prometheus, Grafana, Git, Github, Slack.
Database: Cassandra, HBase, SQLite, MySQL, SQL.
Big Data: Hadoop, Hive, Kafka, Vertica, Data Warehouse.
OS: Windows, MacOS, iOS, CentOS, Ubuntu.

Honors & Awards

- **Salesforce 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 backend services for Apple News/Stocks to **Kubernetes**: implemented proofs of concepts (PoC) with various integrations with other Apple internal services. Designed and implemented **Kustomize** plugins for YAML templating and secrets management. Designed and implemented Kubernetes RBAC for access control and team authorization. Contributed to Kubernetes monitoring solutions including highly available **Prometheus**, **AlertManager**, **Grafana** setups and created Grafana dashboards.
- Regularly demoed and presented various Kubernetes features with internal and external teams to help with Kubernetes onboarding. Recommended the teams on various Kubernetes best practices and design choices.
- 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.
- Designed and implemented PoC for **Kubernetes**-based services that consume from **Kafka**, to reduce **Kafka rebalancing** and improve the services’ overall performance and availability.
- Designed, implemented and lead the effort to migrate release runbooks from error-prone Quip-based runbooks to **Jupyter**-based runbooks. The runbooks are highly automated and extendable, completed with auto-generated **Splunk** queries, posting **Slack** updates, leading to significantly reduced deployment time during product launches.
- Designed and implemented various Python 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.
- Contributed to internal **Gradle** plugins for building Docker images and deploying to Kubernetes/ArgoCD. Improved Gradle plugins’ performance by using Task Configuration Avoidance API.

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.

Education

Master of Science, University of California, Riverside. **GPA**: 3.92/4

Bachelor of Engineering, National University of Singapore, Singapore. **GPA**: 4.42/5