

# Junle "Caleb" Qian

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## EDUCATION

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- **University of Illinois at Urbana Champaign** Urbana, IL  
*Master of Science in Electrical and Computer Engineering* Jan. 2013 – May. 2014
- **University of Illinois at Urbana-Champaign** Urbana, IL  
*Bachelor of Science in Electrical Engineering* Jan. 2009 – Dec. 2012

## PROGRAMMING SKILLS

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- **Languages:** Python, JavaScript/TypeScript, C, C++, PostgreSQL, Java, Perl, Ruby
- **Environments:** AWS, Django, NodeJS, AngularJS, Ruby on Rails, Flask, RPM, Jenkins, Linux Internals

## EXPERIENCE

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- **Teradata** Bellevue, WA  
*Software Engineer II* May 2017 - Present
  - **IntelliCloud DRaaS:** Designed and developed serverless RESTful API and workflow for DRaaS (Disaster Recovery as a Service) in IntelliCloud.
  - **IntelliCloud BaaS:** Designed and developed serverless RESTful API for BaaS (Backup as a Service) in IntelliCloud. Developed the web user interface for metering which indicates backup usage to customers.
- **Amazon Web Services** Seattle, WA  
*Software Development Engineer* July 2014 - May 2017
  - **Blackfoot Deployment Workflow:** Designed and developed the deployment workflow that automated software deployment for the fleet of NAT (network address translation) devices named *Blackfoot*. The *Blackfoot* fleet translate and forward network packets for all EC2 (Elastic Compute Cloud) instances. The workflow scaled to deploy *Blackfoot* devices worldwide and deployment concurrency was adjustable based on operational policies.
  - **Blackfoot Deployment Service:** Designed and developed the deployment service which served as the gateway of the *Blackfoot* deployment workflow. It involved design and development of the RESTful API which opened to create, read, update and delete operations for a software deployment task.
  - **Blackfoot Deployment Website:** Designed and developed a Django website which served as the web user interface of the *Blackfoot* deployment service.
  - **Blackfoot Deployment Command-line Interface:** Designed and developed a command-line interface of the *Blackfoot* deployment service to support command-line operations and scripts.
  - **Blackfoot Alarm Suppression:** Conducted a series of cross-team conversations to renovate the alarm suppression strategy for *Blackfoot* devices. Alarms could be suppressed with a web request, which made it possible to automate ticket creation and resolution against device failures.
  - **ElasticBGP Route Divergence Metric:** Created the metric and alarm that characterize divergence of CIDRs among multiple internal routers. The divergence metric revealed degree of CIDR aggregation in each EC2 availability zone, which helped to monitor and prevent border routers from being overfilled.
- **Amazon** Seattle, WA  
*Software Development Engineer Intern* Summer 2013
  - **Smart AppStore Backend Explorer:** Designed and developed the user-friendly website to explore and test backend service of Amazon Android AppStore.

## PROJECTS

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- **Biometric Unlocking System:** An Android application that simulated a smartphone lock in a machine learning approach. It was trained with SVM (support vector machine) algorithm using finger signature data collected from phone users.
- **MoboSens:** An analytical Android application integrated with biosensor circuitry to measure nitrate concentration in water.
- **Gaming Stimuli:** A set of webpage games developed for the purpose of cognitive research. Moves of players were accompanied with pop-up advertisement images. Performance data that were collected from players was useful to evaluate the cognitive impact of advertisement distraction.