PHILOS TSAI

3A Systems Design Engineering – University of Waterloo | c9tsai@edu.uwaterloo.ca
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SKILLS/QUALIFICATIONS

Languages
Bash, Python, PHP, Javascript, Java, C++
HTML5, CSS3, Coldfusion, MySQL, NoSQL, PlyQL
Tools
Druid, Cassandra, Ansible, Puppet, Chef, HDFS
AWS S3, AWS Glacier, jQuery, Matlab, Arduino

Undergrad Research – *Human-computer System*
Interface design for collaboration in emergency
responses and/or military command
Courses
Data Structures and Algorithms, Linear Systems and Signals
C++ Programming, Circuits and Instrumentation,
Probability and Statistics, Design Engineering, Hardware Design

WORK EXPERIENCE

Jan - Apr 2017

Associate Database Administrator, *Rubicon Project*
· Company-wide automated reports with **Bash** and **Python** scripting
· Built **Druid/Imply** cluster with **Python PyDruid** and **HDFS** plugins to replace MySQL
  reporting queries, reduced *2 hour* query runtimes down to *4 minutes*
· Constructed **Cassandra** cluster to store financial records to safely retain sensitive data
  with no single point of failure
· Enhanced **PHP** dashboard functions/display with **JQuery** and **Dashing**
· **MySQL** Database refreshes and restores from backups
· Optimized **AWS S3** space usage by *80TB*

May - Sep 2016

MySQL Database Administrator, *Rubicon Project*
· Built dashboard to manage dozens of servers across multiple data centers using **PHP,**
  JQuery, HTML and **CSS**
· Large-scale file management and data analysis using **Bash** scripts in **Linux** environment
· Re-structured **MySQL** server CNF configuration process with **Ansible,** speeding up CNF
  file updates from a *few days to less than 10 minutes*
· Managed master-slave replication, currently running on **Tungsten**

Sep - Dec 2015

Access Control Administrator, *Toronto Transit Commission*
· Regulated the rights to networks/applications/databases for all TTC employees
· Acted as main liaison between department heads and coordinated complex tasks

Jan - May 2015

Web Developer, *Public Works & Governmental Services Canada*
· Upgraded government production web application to become twice as efficient using
  HTML, CSS, Coldfusion, JavaScript
· Designed and built workplace's wireless network, solved networking and hardware issues

EDUCATION/RESEARCH

Jan - May 2016

Undergraduate Research Assistantship - Human-technology interaction study
· Designed and developed simulation software for large tabular surface in **Java**

Sep - Jun 2019

Systems Design Engineering - Candidate for Bachelor of Applied Science
University of Waterloo*, Waterloo, ON, Canada*

AWARDS

2015

Queen's Venturer's Award - *Scouts-Canada*

Highest scouting award for leadership, teamwork, environmental and community contributions