Shi-Hao (Steve) Liu

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EDUCATION

M.S. in Computer Science, Arizona State University, Tempe, AZ **08/2017-5/2019 (Expected)**
B.S. in Computer Science, National Tsing Hua University, Hsinchu, Taiwan **09/2009-06/2013**

TECHINICAL SKILLS

- **Languages**: Python, JavaScript/ES6, Golang, Java, Html5, SCSS, SQL, Makefile, Shell Scripts
- **Frameworks:** Tornado, Django, Flask, Scrapy, IPython, Supervisor, Node.js, Grunt, React, Redux, jQuery, jqChart
- **Databases/Tools**: MYSQL, MongoDB, Redis, Memcached, Docker, LXC, Webpack, Gradle, Jenkins, GCP, AWS, git

WORK EXPERIENCE

Software Engineer, QNAP Systems Incorporation, New Taipei City, Taiwan **03/2015-03/2017**
  Browser Station (Django, Supervisor, React, Redis, MongoDB) goo.gl/vL448b
- Achieved 25k+ downloads by designing web service to avoid complex VPN settings when remotely accessing
- Implemented the backend service with Django REST, Redis Pub/Sub and MongoDB based on Docker orchestra
- Designed a new Docker virtual desktop image with customized LXDE virtual desktop, noVNC, Chrome and Firefox
  Linux Station (Debian, Autoconf, LXC, C, Bash) goo.gl/dasESF
- Migrated Ubuntu 14.04/16.04 root filesystems to seamlessly integrate with lightweight LXC containers
- Synchronized audio via PulseAudio between monitors switching; Improved Ubuntu APT updating speeds; Python random library patches in kernel 3.12; Fixed Gnome screensaver inactive and Software Center issue;
  Container Station (Junit, Selenium) goo.gl/PgxXjd
- Implemented integration tests from scratch with Junit Selenium based on Gradle on daily Jenkins routines

Military Service, Keelung City Government, Keelung City, Taiwan **10/2013-10/2014**

OPEN SOURCE EXPERIENCE

Tornado, Python Asynchronous Web Framework (15k+ stars), Contributor goo.gl/DdsUHJ **2017**
Memory Leaks in TCP client
- Refactored TCP client with built-in timeout by closing underlying sockets and designed coverage Mock tests
Python Syntax Checking in AutoReload Module
- Refactored AutoReload by passing global variables between namespace of main and modules to detect syntax errors

Got, Node.js Simplified HTTP Requests (2.2k+ stars), Contributor goo.gl/ZbAADF **2018**
API Enhancement
- Now work on wrapping the underlying stream with got API to ensure each request with the same configurable retries

Docker-VNC-Desktop, Docker Image with noVNC (500+ stars), Contributor goo.gl/B6suRq **2018**
Key Stroke Repeating
- Enabled the X server key auto repeating when VNC clients are connected

Increasing, Python Coloring Processing Bar, Committer goo.gl/ddF9Nr **2017**
- Built easily use progress-bar for command-line/terminal/applications with full customizable output format

PROJECTS

Tracing Major Brokers in Taiwan Stock (jQuery, Selenium, MySQL, OpenCV, GCP) goo.gl/SxACjA **2017**
- Built up a dashboard website with Tornado and charts visualization with jQuery and jqChart
- Developed dockerized Selenium crawlers on GCP to fetch 1.5k+ Taiwan companies' daily transaction CSV reports
- Broke CAPTCAHs with 85% accuracy in Python, OpenCV and MSE comparisons on Taiwan Stock Exchange website

D3.js Gallery (D3.js) goo.gl/WBVu37 **2017**
- Glowing audio visualizer by frequency of MP3; Ideal clock with polar lighting background; Animated radar chart; Stock buying/selling visualization with TreeMap

Raft Consensus Algorithm (Golang) goo.gl/R6gjhE **2017**
- Inspired by Docker Swarm and Hashicorp Consul to build containers cluster to simulate leader elections by using Golang channels in fault-tolerant distributed systems