yh772@cornell.edu
607-262-2832

Yuan He

125 Orbit Way, Mountain View, CA 94043

Github: yuanhe772
www.yuanhe.fun

SKILLS

Languages: Java, Python, SQL, C++/C, PHP, HTML, JavaScript, GoLang, Solidity
Tools & Frameworks: Git, Bash, Chrome DevTools, Jenkins, Nagios, Elk Stack, MATLAB, SPSS, AutoCAD, Scrapy, TCPdump, jQuery, AJAX, AWS(EC2), Nginx, MongoDB, MemcacheD, MySQL, Penetration Test, Blockchain Smart Contract, Tensorflow(Keras)

EDUCATION

Cornell University, Ithaca, NY   **Expected Jun. 2019**
Master of Engineering in Electrical and Computer Engineering, **GPA: 3.815/4.00**

Tianjin University, Tianjin, China   **Aug. 2013-Jul. 2017**
Bachelor of Science in Measuring and Control Technology and Instruments (EE), **GPA: 3.60/4.00**, **Rank: 30/138**

WORK EXPERIENCE

Zingbox Inc., *Incoming SDE Intern* @ Mountain View, CA   **Aug. 2018-Jan. 2019**

Newsky Security Solution Inc., *SDE Intern & Blockchain Researcher* @ Redmond, WA   **May 2018-Aug. 2018**
- Deployed a highly scalable monitor system with Nagios from scratch for an IoT security application, successfully captured two AWS EC2 server down and migrated the services before business demo
- Co-developed a honeynet(Cowrie and Kako) attack intelligence system, pipelined each honeypot's logs with Filebeat, aggregated and filtered logs in a centralized Logstash, managed with ElasticSearch and Kibana
- Wrote non-GUI honeynet intelligence database's APIs in GoLang and Python, delivered data in a timely manner
- Deployed open-source cryptocurrency exchanges website with Docker container and AWS EC2, conducted vulnerability tests including balance underflow/overflow attacks
- Published Medium tech blogs for company's blockchain branch *Haloblock*, got 800+ applauses in the past month

National Metrization Equipment Center of Road and Bridge, *SDE Intern* @ Beijing, China   **Dec. 2016-May 2017**
- Developed a computer-vision based dynamic measuring system for asphalt pavement's permeability coefficient from scratch, including both the hardware and software (Visual studio + OpenCV)
- Implemented dynamic image processing (optimized algorithm to process less than half of IFS), servo tracking, data visualizing, and equipment calibrating. Integrated them into a UI-based software (Visual Studio MFC)
- System's relative uncertainty was 6.28%, one-third of the technical specification requirements

RELEVANT PROJECTS

Degree Project: Cloud Application Benchmarking System Leveraging ML, Cornell University   **May 2018**
- Set up tracing on a Netflix-like distributed application deployed with microservices (Apache Thrift) architecture
- Collected end-to-end traces by inserting timestamps around each microservice with Thrift logger and TCPdump
- Generated ideal core allocation ratio for each service, based off of CPU utilization, tail latency and network latency statistics, and added CPU interference to pinpoint the most CPU-bound services for load-balancer design
- Utilized deep NN with 3-d input data in form of [service, time, measurement], with a predicting time of 100ms on average, small enough to automatically predict Quality of Service violations before they could occur

Embedded OS project: Smart Door System, Cornell University   **Dec. 2017**
- Built a door-guarding system on Raspberry Pi, permitting access with face, voice and fingerprint recognition, with a touch screen GUI and a secured-login webpage for remote control
- Set up server (Python Flask) on Pi to support front-end webpage and restored admin info in a local DB (MySQL)
- Designed web APIs for video-streaming, visitor verifying, voice mailbox, and door lock's remote control
- Face recognition ran at 15 FPS utilizing multi-core parallelizing, 3X faster than single-core implementation

A Multi-threaded Key-Value Store Server, Cornell University   **Oct. 2017**
- Designed a multi-thread key-value store database server (Python) with REST APIs, TTL, and disk-optimization
- Maintained a 32-thread pool to serve multiple clients, and a queue for pipelining client's requests sequentially
- Implemented thread safety using only Python's synchronization primitives, instead of other thread-safe modules

Online To-do List Calender, Udemy   **June 2018**
- Built a calendar based to-do list application from scratch, self-designed front-end with CSS and jQuery, constructed back-end database with MySQL, and cooperated their logic with PHP and AJAX