

yh772@cornell.edu  
607-262-2832

**Yuan He**  
125 Orbit Way, Mountain View, CA 94043

Github: yuanhe772  
[www.yuanhe.fun](http://www.yuanhe.fun)

## SKILLS

**Languages:** Java, Python, C++/C, JavaScript, PHP, HTML, GoLang, SQL, Solidity

**Tools & Frameworks:** Git, Bash, Chrome DevTools, Jenkins, Nagios, Elk Stack, TCP/IP Sockets, Node.js, jQuery, AJAX, MongoDB, MemcacheD, MySQL, Kafka, AWS(EC2), Nginx, Penetration Test, Blockchain Smart Contract, Tensorflow(Keras), Pytorch, Scikit, Scrapy

## 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.**, *SDE Intern @* Mountain View, CA

**Aug. 2018-Jan. 2019**

- Cooperate with UI/UX team to design web APIs using JavaScript and Node.JS by leveraging MongoDB
- Design unit tests for RESTful APIs through Mocha and Chai using promises
- Develop background and cron jobs in Python to handle real-time data stream via Kafka

**Newskey 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 monitor application, successfully captured twice 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 honeynet intelligence database's APIs in GoLang and Python, delivered data in a timely manner
- Deployed open-source cryptocurrency exchanges with Docker and AWS EC2, conducted web penetration tests
- Published Medium tech blogs for company's blockchain branch *Haloblock*, got 800+ applauds 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 CPU allocation ratio for Nginx load-balancer design, based on CPU and tail latency statistics
- 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-lock system on Raspberry Pi, with touch screen GUI and a webpage interface for remote control
- Set up server on Pi (Python Flask) to support front-end webpage and restored admin info in local DB (MySQL)
- Designed 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 doc-oriented database server (Python) with RESTful APIs, TTL, and disk-optimization
- Maintained a 32-thread pool to serve multiple clients, and a queue for pipelining client's requests sequentially

**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