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Yuan He

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SKILLS

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

Tools & Frameworks: Git, Bash, Chrome DevTools, Jenkins, Nagios, Elk Stack, Node.js, Express, Mocha, Chai, jQuery, AJAX, MongoDB, MySQL, Kafka, AWS(EC2&S3), Nginx, Blockchain Smart Contract, Penetration Test, TCP/IP Sockets, Tensorflow(Keras), PyTorch, Scikit-Learn, Scrapy

EDUCATION

Cornell University, Ithaca, NY **Expected May 2019**
Master of Engineering in Electrical and Computer Engineering, **GPA: 3.82/4.00**

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**

- Cooperated with UI/UX team in designing APIs and corresponding unit tests using Node.JS and MongoDB
- Maintained system Cron jobs to create system reports with better readability and maintainability
- Developed background job in Python to handle real-time Kafka data stream, automated file flow in AWS S3 and data manipulation in MongoDB
- Integrated third-party plugins, and designed internal APIs accordingly for plugin management
- Designed Open API authentication feature leveraging JWT token, including implementation for user authentication phase and CRUD operations for Open API's access keys

Newsky Security Solution Inc., *SDE Intern* @ Redmond, WA **May 2018-Aug. 2018**

- Deployed a scalable server monitoring system with Nagios from scratch for an IoT security application, and responsible for migrating services among different cloud servers
- Co-developed a honeynet threat intelligence system, piped honeypot's logs with Filebeat, aggregated and filtered logs in a centralized Logstash, and managed outcome with Elasticsearch
- Designed honeynet intelligence database's APIs in GoLang and Python, delivered data in a timely manner
- Conducted web penetration tests for open-source Ethereum exchanges in containers and AWS EC2
- Published Medium tech blogs for blockchain branch *Haloblock*, got 1000+ applauses

National Research Institute of Highway Ministry of Transport, *SDE Intern* @ Beijing, China **Dec. 2016-May 2017**

- Developed a computer-vision based dynamic measuring system for asphalt pavement's permeability coefficient from scratch, on both hardware and software (Visual Studio + OpenCV)
- Implemented dynamic image processing (reduced processing time down to half of IFS), servo tracking, data visualizing, and equipment calibrating; Integrated them into a Visual Studio MFC software
- Reduced system's relative uncertainty from 15% to 6.28%, 1/3 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 system deployed in microservices (Apache Thrift) architecture
- Collected end-to-end traces by wrapping each microservice with timestamps using Thrift logger and TCPdump
- Generated reasonable core ratio for Nginx load-balancer, based on CPU% and tail latency statistics
- Utilized deep Neural Network to predict (< 100ms) 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 R-Pi with Python Flask and manipulated user data with MySQL
- Designed APIs for video streaming, user verification, voice mailbox, and physical door lock's remote control
- Speeded up face recognition to run at 15 FPS with multi-core parallelizing, 3X faster than single-core design

A Multi-threaded Key-Value Store Server, Cornell University **Oct. 2017**

- Designed a multi-thread doc-oriented database server with RESTful APIs, TTL, and disk-optimization
- Maintained a 32-thread pool to serve multiple clients, and a message queue for pipelining client's requests