

# JIE-REN (JARRON) SHIH

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As a 5-year experience developer, infrastructure builder, and security consultant, Jie-Ren Shih is experienced in building secure, scalability, and high availability enterprise product. With experience of hosting container-based and serverless web service on AWS, he is an expert in DevOps process from developing, testing, operation, and monitoring modern web service. Jie-Ren is also familiar with cloud related technologies including AWS, kubernetes, docker, and serverless architecture.

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## SKILLS

Programming	Python, Javascript, C/C++, HTML/CSS,
DevOps	Docker, Jenkins, CI/CD, Monitor/Alert, Unittest,
Cloud Skills	AWS, Kubernetes, Docker Swarm, SaaS system design, Scalable system design,
Linux System	Boot process, Encryption driver, Network programming,



## EMPLOYMENT

### Staff Software Developer, Trend Micro

2017-01 — Present

Design and implement SaaS service running in cloud platform with container orchestration. Targeting for automatically CI/CD and high test coverage.

- Design, develop and operate *container-based services* from company data center to AWS for SaaS.
- Introduce *asynchronous* on Python to enhance process and I/O usage with 60% improvement.
- *Legacy code remodeled*: Python 2 to 3, built up unittest and integration test from scratch (0% to over 90%).
- Separate data streaming part from monolithic application to embrace *serviceless framework*.

### Senior Software Developer, Trend Micro

2015-10 — 2016-12

In network defense group, responsible for CI/CD, network traffic parsing and hosting a Sandbox SaaS service.

- Introduce *CI/CD* best practice to the product, as the standard of the following project.
- Enhance SaaS service to support multi-tenancy customers sharing resource in the cloud.
- Parsing network traffic in packet level, work as *data engineer* in network analysis product.

### Senior Software Developer, Trend Micro

2015-01 — 2015-10

In Cloud and Data Center Security Product team, the most profitable products, responsible for SAP virus scan on Windows platform, including Anti-Malware, JavaScript active script scan and Mail scan.

- Integrate Anti-Malware solution and active script scan solution to prevent *Cross Site Scripting Attack*.
- Develop virus scan interface for SAP on Windows platform to meet the market demand.

### Software Developer, Trend Micro

2012-09 — 2014-12

In Cloud Storage Encryption Product Team, responsible for development boot device encryption feature and Linux software agents on cloud service platform.

- Implement boot disk encryption feature to prevent boot data leakage on Windows and variant Linux distributions, including Ubuntu, CentOS, RHEL, AmazonLinux and SUSE.
- Design software on major cloud service providers including Amazon EC2, Microsoft Azure and HP-Cloud.
- 2013 Q2 Trend Engineer of Quarter.

### Research Assistant, Part-time, NTU and Intel Corp

2011-01 — 2012-06

As chief designer of building hybrid model and build up high level hardware simulation and scalable ASIC analysis.

- Implement scalable ASIC with NTRU and TTS cryptography with 25% area reduction.
- Determine the optimal degree of parallelism from software simulation.



## EDUCATION

### National Taiwan University

Foundation of Cryptography, Artificial Intelligence, Parallel and Distribution Computing, 2010-09 — 2012-07

### National Taiwan University

First Prize in NTUEE Undergraduate Outstanding Project. 2006-09 — 2010-07



## WRITING

### [Patent] Root Volume Encryption Mechanism in Para-virtualized Virtual Machine, Trend Micro

Achieve root volume encryption in a para-virtualized virtual machine 2015

### MIFARE Classic: Practical Attacks and Defenses, Chinese Cryptology and Information Security Association

2013

### Securing M2M with Post-quantum Public-key Cryptography, Emerging and Selected Topics in Circuits and Systems / IEEE Journal

2013

### A practical experience with RFID security, Mobile Data Management: Systems, Services and Middleware, 2009 / IEEE

2009



## RECOGNITION

### 2013 Q2 Engineer of Quarter, Trend Micro

2013



## INTERESTS

### Contract Bridge

