BRIAN (YUAN-AN) LIU

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EDUCATION

ILLINOIS INSTITUTE OF TECHNOLOGY, Chicago, IL
Master of Science, Computer Science — Aug 2016 - May 2018
Association: IIT-Security Lab

CHUNG YUAN CHRISTIAN UNIVERSITY, Taoyuan, Taiwan
Bachelor of Science, Information and Computer Engineering (Computer Science) — Sept 2011 - Jun 2015
Association: CYCU-Software Engineering Lab

SKILLS

- **Languages:** C++, C, Python, Shell Script, TypeScript, Go
- **Networking/ Protocols:** NSH, SFC, VLAN, VxLAN, TCP/IP, REST, SOAP, P2P, ZMQ, SRv6
- **Technologies:** Distributed/Embedded Systems, Security, SDN, NFV, Machine learning, Git, Perforce, Docker, OF, OVS, GNU toolchain, Mininet, OpenStack, ESXi, JIRA, Bugzilla**,** Apache, Flask, Django, React, YAML, yarn, MySQL, MongoDB

EXPERIENCE

F5 NETWORKS, INC, San Jose, CA — July 2018 - Present
Software Engineer
- Primarily working on F5 BIG-IP's Policy Enforcement Manager and Service Function Chaining
- Implementation and maintenance for F5's products with a focus on both control and data plane.
- Development solutions for application delivery networking in CI/CD pipelines.
- SDN Controller (ODL) / RFC(s) feasibility Study and implementation.

KYPHER, LLC, St. Louis, MO — May 2017 - Aug 2017
Application Developer Intern
- Full Stack Developer for Kypher ™ HIPAA Compliant Messaging iOS application and IIS server.

R.O.C. NAVY, FFG-934, Taiwan — Jul 2015 - Jun 2016
Sonar Technician Seaman (Mandatory Military Service)
- Operated and maintained sonar and underwater fire control systems

MOREMOTE, INC., Taipei, Taiwan — Jul 2014 - Jun 2015
Embedded Systems Software Engineer
- Developed applications for two IP-Camera projects (BBCam ™ and Ability HomeCam™).
- Created a client/server relationship between systems based on Apache Tomcat using SOAP, P2P with C++
- Responsible for strategy assessment, feasibility study, software release maintenance, and code reviews.

PUBLICATION

1. **A Distributed Virtual Time on Embedded System for Evaluating Cyber-Physical Systems** (ACM SIGSIM-PADS 2019) *(Best Paper Award)*
2. **A Distributed Embedded Linux System Smart Grid Testbed** (GCASR 2018)
- Provide synchronization solution for real-time processes to synchronize with a discrete time step solution electric power simulator using SDN (OpenvSwitch/Ryu/OpenFlow)

ACADEMIC PROJECTS

System Benchmarking and TeraSort on Cloud — Aug 2017 - Dec 2017
- Evaluated CPU, Memory, GPU, Disk and Network Performance on Private Cloud with OpenStack.
- Implemented with Python, C++, CUDA and Shell Script.
- Cross validated with LINPACK Benchmarks, STREAM, IOZone and IPerf.
- Implemented parallel external sort using Python, Hadoop and Spark on multi-node of AWS EC2 i3

Implementation and improvisation of Netplumber — Jan 2017 - May 2017
- Implementation of the NetPlumber - Header Space Analysis
- Improvisation by using Girvan–Newman algorithm for Machine learning.
- Building an additional way to determine rules by providing statistical data