

AHNAF SIDDIQI | email: ahnafsid[at]gmail.com phone: +65 Nine-Seven-Three-Four-Two-Nine-Seven-Eight

A learner with 3.5 years of experience, with an interest in network security, cloud architecture, and system design.

EDUCATION

Singapore University of Technology and Design

Class of 2016

Bachelor of Engineering with Honours majoring in Information Systems Technology and Design.

Specialization: Security and Communications, Artificial Intelligence.

SKILLS

I am experienced in: Python, C++, Docker, Git, Linux, Make, Nginx, Sys Admin, PostgreSQL, InfluxDB, Bash, X509 Certs. I am familiar with: Javascript, HTML, CSS, GDB, SQLite, Puppet, Haskell, Valgrind, Redis, Kubernetes.

WORK EXPERIENCE

Software Engineer in MicroSec Pte. Ltd.

Dec'17 - Now

I engage in designing the technical system solution from requirements to application implementation, delivery, maintenance, and customer support for Certificate Management and Load Monitoring Products.

- Working with CTO, PM and CSM manager to identify product requirements and provide technical solutions.
- Designing different solutions to achieve the project requirements.
- Collaborating with multiple teams of 5+ individuals in implementing pipeline following Scrum methodology.
- Solutions primarily includes implementing REST APIs, near real-time data using MQTT, WebSockets, and developing modified in-house implementations of ACMEv2, EST, SCEP.
- Developing MicroPKI: a proprietary protocol providing end-to-end encryption for embedded devices in IoT, which supports TLS 1.3 using P256, Ed25519, AES.
- Relational and TimeSeries Database administration and role management with appropriate security levels.
- Performing DevOps with Gitlab and Docker and providing CI/CD to on-premise and cloud servers using docker-swarm, kubernetes.
- System Administration of on-premise servers running on Hyper-V and cloud servers on AWS EC2.
- Limited experience on frontend development using Angular.
- Limited experience on embedded development for arm-cortex-m series.
- Supervision and management of interns to full time employees following companies operating procedure.

Tech Stack: Python, C++, Flask, SQLAlchemy, Hypothesis, Docker, Nginx, CI, Puppet, PostgreSQL, Angular, Valgrind, Wireshark, AWS EC2, Droplets, X509 Certificates, Certificate Authority, Kubernetes, Redis, Influx

Research Assistant in iTrust Research Center for CyberSecurity

Nov'16 - Oct'17

Common Industrial Protocol (CIP) is a realtime network protocol being used in Secure Water Treatment (SWaT) testbed at SUTD. I followed specifications to implement a concurrent server to be used in simulation and various research purposes.

- Analyzed and reconstructed high volume CIP packets of both TCP and UDP variants using wireshark.
- Designed application using TDD and SOLID principles of OOP.
- Analysed Networks for vulnerabilities in testbeds: SWat and EPIC.

Publication: A. Siddiqi, N. O. Tippenhauer, D. Mashima, and B. Chen, "On practical threat scenario testing in an electric power ics testbed," in Proceedings of the cyber-physical system security workshop (cpss), co-located with asiaccs, 2018.

Tech Stack: Python, Flask, Wireshark, LxC, EtherNet/IP.

ACTIVITIES

External Involvements - NUS XCTF 2016, Finalists for APEX Business-IT Global Case Challenge 2016, SG50 Hackathon 2015 Smart Nation, Secretary for University Photography Club.

Interests - Photography, Running, Non-Profit Social Events, Exploring Culture, CaptureTheFlag, Network Security, Physical Systems Security, Linux, Arch and Emacs.

Languages - English (Full Professional Proficiency), Bengali (Native). I am trying to learn French, Bahasa and Korean using Duolingo, for fun.