

EDUCATION

Singapore University of Technology and Design

Class of 2016

Bachelor of Engineering with major in Information Systems Technology and Design.

Focus Tracks: Security and Communications, Artificial Intelligence.

WORK EXPERIENCE

Backend Developer in MicroSec Pte. Ltd.

Dec'17 - Present

Developed and implemented a network protocol library to reproduce packets of Common Industrial Protocol for Secure Water Treatment (SWaT) testbed to be utilized for various simulations in research.

Research Assistant in iTrust Research Center for CyberSecurity

Nov'16 - Oct'17

Developed and implemented a network protocol library to reproduce packets of Common Industrial Protocol for Secure Water Treatment (SWaT) testbed to be utilized for various simulations in research.

- Analyzed and reconstructed CIP packets for both TCP and UDP section using wireshark.
- Designed and implemented an API for the package using TDD and SOLID principles of OOP.
- The library was used in a CaptureTheFlag competition in an international inter-university competition for SecureCyber-Physical(Scy-Phy) Systems Week.
- Developed, deployed, and maintained a webchallenge in AmazonEC2 for the competition.
- Used linux containers, uniquely mapped to each team, to run privileged code in a secure way.

Web Developer in Souschef

Oct'16 - Jan'17

Developed a configuration panel which takes user input, stores in a DB, and uploads them across multiple remote machines(prototypes).

- Improve my knowledge in the fundamentals of JS, Express, and TDD. A part-time adventure.

Teaching Assistant in General Assembly

Aug - Sep'16

Assisted instructor to help teach the basics of web development from scratch.

- Taught CLI, git, HTML, CSS, Javascript, and Express to students.
- Managed multiple tasks which included analyzing project codes and programming tests.

Web Developer Intern in Tinkerbox Studios

May - Aug'15

Programmed backend functionality and wrote test cases for projects following agile methodology.

- Practiced TestDrivenDevelopment using Ruby-on-Rails.
- Worked on models, views, and controllers and wrote/refactored their new/old tests.
- Implemented simple front-end interactive pages.

PROJECTS

Social Project for Children with Autism

Sep'16 - Nov'17

Designed a new curriculum to teach programming and simple robotics to special needs children.

- Analyzed the students initial performance by taking several tests which measured their memory and sequential task handling abilities.
- The curriculum used Edison robot to provide the visual interface for programming and Lego bricks as a simple building block for robotics and integrates them.

Capstone Project - Interactive Animatronic Dragon

Jan - Aug'16

Established a network to transfer data between multiple sections of a prototype of an animatronic dragon which detects users in its peripherals and performs action

- Implemented an ad-hoc network with static IP for P2P connections between two RaspberryPi.
- Developed a state machine to categorize different outputs according to user inputs.

- Used Open CV to detect user movement to be used as inputs for the statemachine.

Web Development - Non-academic University Project

Dec'15 - July'16

Create a platform for a booking system of graduate students seating.

- Developed the platform using Laravel and hosted in university server.

SKILLS

Python, Javascript, Ruby, Java, C, CSS, HTML, MySQL, PostgreSQL, Rails, Flask, Laravel, OpenCV, Linux

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.