AHNAF SIDDIQI

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EDUCATION

Singapore University of Technology and Design   **Class of 2016**
- Bachelor of Engineering with a major in Information Systems Technology and Design.
- Focus Tracks: Security and Communications, Artificial Intelligence.

WORK EXPERIENCE

Research Assistant at iTrust Research Center for CyberSecurity   **Nov' 16 - 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.
- Analyzed and reconstructed CIP packets for both TCP and UDP sections using wireshark.
- Designed and implemented an API for the package using TDD and SOLID principles of OOP.
- The library was used in a Capture The Flag competition in an international inter-university competition for Secure Cyber-Physical(Scy-Phy) Systems Week at SUTD.
- Developed, deployed and maintained a web challenge in Amazon EC2 for the competition.
- Used linux containers, uniquely mapped to each team, to run privileged code in a secure way.

Web Developer at 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 at 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 at Tinkerbox Studios   **May - Aug '15**

Programmed backend functionality and wrote test cases for projects following agile methodology.
- Practiced Test Driven Development using Ruby on Rails.
- Worked on models, view, and controllers and wrote/refactored their new/old tests.
- Implemented simple front-end interactive pages.

PROJECTS

Social Project for Children with Autism   **Sep '16 - Present**

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 uses 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 '16 - 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 Raspberry Pi.
- Developed a state machine to categorize different outputs according to user inputs.
- Used OpenCV to detect user movement to be used as inputs for the state machine.

Web Development - Non-academic Project for University   **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, Hackathon@SG50 2015 Smart Nation, Secretary for University Photography Club.

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