

Rikaard Hosein

SOFTWARE ENGINEER · SECURITY ENTHUSIAST

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Education

University of the West Indies

Trinidad and Tobago

BSC. IN COMPUTER SCIENCE (FIRST CLASS HONS.)

2011 - 2015

- Created a SOCKS5 proxy server for a software engineering project.
- Created a web application called Crime.tt that crowdsourced crime information and provided useful metrics for decision making using k-means clustering, graphing and extrapolation.

Experience

Auth0

Trinidad and Tobago

SOFTWARE ENGINEER

August 2016 - Present

- Set up instrumentation and visualization of system and application metrics using Telegraf, InfluxDB and Grafana.
- Helped design and implement a solution for replicating data between Elasticsearch clusters in different geographical regions.
- Created and maintained Ansible scripts for managing infrastructure.
- Set up and maintained Teleport and related infrastructure on AWS to allow customer-facing engineers to have easier access to environments while keeping audit trails for compliance.

Digicel

Trinidad and Tobago

SOFTWARE ENGINEER

March 2016 - June 2016

- Introduced the development team to a number of agile methodologies/practices like Scrum.
- Worked on internal projects to improve efficiency and automation in the business.
- Worked on web applications in Python(Flask) and Golang(Gin).
- Designed suitable encryption schemes for the storage of sensitive data.
- Conducted software engineering interviews.

GroupBy Inc

Trinidad and Tobago

SOFTWARE ENGINEER

November 2014 - November 2015

- Gained experience working in an agile environment (scrum, test-driven development and continuous integration).
- Helped develop a command-line tool used to manage VM clusters hosted on the Google Cloud Platform.
- Profiled and optimized various applications in Java leading to significant performance improvements and more efficient garbage collection.
- Discovered and fixed critical vulnerabilities in client-facing software.
- Dockerized a number of services and created docker-compose scripts for launching platforms consisting of said services.
- Successfully refactored a Node.js based analytics and recommendations platform to increase efficiency and reduce complexity.

Knowledge Hope Ltd

Trinidad and Tobago

SOFTWARE ENGINEER

May 2014 - October 2014

- Created a module for PyroCMS that functions as a live glossary.
- Created Docker images for MongoDB, PredictionIO and PyroCMS.
- Created a number of activities/games (multiple choice, place-in-order, crossword puzzles, etc) using AngularJS, HTML5 and CSS3.

University of the West Indies

Trinidad and Tobago

RESEARCH ASSISTANT

June 2013 - September 2013

- Developed a Moodle plugin in PHP that uses machine learning/artificial intelligence techniques to predict final grades based on coursework marks.
- Developed a skeleton for a remote administration and monitoring tool for monitoring computer usage based on different criteria in C++ and Python.

HackThisSite

International

TEAM MEMBER

2016 - Present

- A small group of computer programmers and security enthusiasts with a strong focus on security-based capture-the-flag competitions and competitive programming competitions.
- Participates in competitions such as the PPP CTF, Defcon CTF, CSAW CTF and the HackYou CTF.
- My position on the team involves tackling the Reverse Engineering, Cryptography and Binary Exploitation challenges but I will tackle other areas when necessary.

Skills

Programming Languages

- C, C++, X86 Assembly
- Python, Javascript(Node.JS), Go
- Java, PHP, Bash
- HTML, CSS

Security

- Application Security - Extensive experience in writing secure code.
- Cryptography - Practical knowledge of cryptographic techniques and their properties.
- Reverse Engineering - Significant experience in reverse engineering applications using disassemblers and debuggers like IDA Pro and ImmunityDbg.

Misc Technologies

- Docker, Docker-Compose, Telegraf, InfluxDB, Grafana, Ansible, Puppet, HAProxy, Teleport, RabbitMQ, Sensu

Honors & Awards

AWARDS

- 1st Place in the DCIT Runtime Competition(Advanced), 2014**
- Participant in the ACM-ICPC Caribbean Regional Competition, 2013**
- 1st Place in the ACM-ICPC Nationals, 2013**
- Participant in the ACM-ICPC Caribbean Regional Competition, 2012**
- 1st Place in the ACM-ICPC Nationals, 2012**
- 1st Place in the DCIT Runtime Competition(Beginner), 2012**
- Dean's Honour Roll, University of the West Indies**

Certifications

2011 **CCNA**, SBCS

*Trinidad and
Tobago*

2006 **Programming in Java**, SBCS

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Tobago*

2006 **Programming in VB.NET**, SBCS

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Presentation

OWASP

Trinidad and Tobago

PRESENTER FOR <APPLICATION SECURITY PRELUDE : THE BROWSER SECURITY MODEL>

- An Introduction to the Browser Security Model; in-depth introduction to HTTP Headers, Cookies, Same-Origin Policy, etc

Writing

www.rikaard.io || www.rikaard.blogspot.com

Blog

FOUNDER & WRITER

2011-Present

- Write-ups from CTF challenges I've done.

Program Committees

2016 **Projects Coordinator Lead**, OWASP

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2016 **Adjunct Scientist**, Lab.tt

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