Guilhem Mizrahi

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Summary: Cybersecurity student and engineering graduate with a background in pure Mathematics and Computer Science. Seeking a role in a security agency with opportunities to apply my experience in research, analysis and interest in cybersecurity.

SecureSet Academy

July 2019 to December 2019

CORE Cybersecurity Engineering Program, Denver, Colorado
Over 800 hours of training in fundamentals concepts of cybersecurity:

- Network Security: OSI model, network architectures, protocols, vulnerabilities. Analysis of traffic, setting up servers.
- System Security: Linux systems, architecture, and processes. Python and bash scripting. Exploitation & Pen Testing, Log Analysis & Detection. Metasploit, Powersploit, PSRecon1, Mimikatz and Mitre ATTA&CK framework.
- Cryptography: Applied symmetric and asymmetric cryptography. Encryption and decryption using Python.
- Threat Analysis & Strategy and Governance Risk & Compliance (GRC).

Tools and projects

- IP-lookups: extract IPv4 addresses from a text file, retrieve the GeoIP and RDAP info and interface with a MySQL database to manage this info (Python and MySQL).
- Brute force of md5 hashes: use of parallel computing to generate md5 hashes and test for collision with a list of md5 hashes provided. Generation of my own rainbow table (Python and AWS).
- Capture the flag: participation to CTFs held by Secureset, challenges on `overthewire.com`.
- Cracking of RSA for small prime numbers.

CERMICS lab, Ecole Nationale des Ponts et Chaussées.

May 2018 to August 2018

(Center for Training and Research in MathematIcs and Scientific Computing).

- Fundamental research in applied mathematics under the supervision of Frédéric Meunier on the colorability of Kneser graphs and other hypergraphs. Graph theory is essential to many topics of applied mathematics such as optimization or computer science.

  Writing of a scientific paper including the two major theorems resulting from my research work. This paper has been sent to international mathematicians to provide them with solutions to questions they had asked.

Ecole Centrale de Lyon, Engineering School

September 2016 to March 2019

- Deep Learning - Prediction of the emotions induced by videos (Pytorch).
- Parallel computing in C++ - Implementation of the Game of Life.
- Implementation of a board game in Python (with UI and game mechanics). Computation of statistical best move.
- Implementation of a database manager software for a car dealer in Python and MySQL.
- Use of Python for scientific computing.
- Development from scratch of a copy of the famous app 2048 in C++ with QTCreator, of a multiplayer Pong game in Javascript and of a mobile game for Android in Java with VisualStudio.

University Lyon 1, Bachelor of pure mathematics.

2016-2017

- General algebra, group theory, geometry
- Measure theory and integration, topology
- Calculus, differential equations
- Real analysis, complex analysis, matrix analysis
- Probabilities and statistics.

Lycée Henri IV *Classe préparatoire MP** in Paris.

2013-2016

Additional skills

- Seminars and conferences on Mathematics, Computer science and Physics.
- Linux - Installation and use of several distributions (Ubuntu, Manjaro, Kali ...).
- Git - Local use of Git linked to my Github for project management.
- LaTex - Use of LaTex for assigments and articles.

Languages and achievements

- French, English (Fluent), German (Basics)
- GMAT 730/800 (top 4%)

Social Networks

GitHub: `github.com/g-mizrahi`
Linkedin: `linkedin.com/in/guilhem-mizrahi`