Jonathan Levy

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Education

University of South Florida

Tampa, Fl

Bachelor of Arts in Mathematics

May 2016 - Dec 2019

 Courses: Real Analysis, Abstract Algebra, Vector Calculus, Linear Algebra, Probability Theory, Combinatorics, Graph Theory, Cryptography, Calculus(I,II,III).

Pasco Hernando State College

Spring Hill, Fl

Associate of Arts

Jan. 2013 - Dec. 2015

Work Experience

Pasco Hernando State College

Spring Hill, Fl

Mathematics Tutor

May 2014 - May 2017

- Assisted GED, remedial, and college-level students in a breadth of topics ranging in difficulty from elementary algebra to differential equations.
- Facilitated the understanding of mathematical topics by approaching problems in a relatable and practical manner.
- Coordinated group sessions, ensured equitable attention to all students.

Projects

Known Plain-Text Attack

Source

Used a known-plaintext attack in my Cryptography course to successfully decrypt an image for a class project. The prior knowledge for this project was the encrypted image, and that the image was padded in multiples of 24-bytes. By using the first 16-bytes of the file header, this provided a starting point for obtaining the key in order to capture the flag.

Blockchain Challenge

Participated in, and won, an in-class cryptocurrency challenge by verifying pending transactions with the RSA signature of the previous transaction on the blockchain, then doing the proof of work. Each transaction had an associated 'fee' whereby the total accumulated fees dictated the winner. Since there were no restrictions, I automated the process in Bash by parsing all pending transaction for the highest fees, verified the transactions, initiated the proof of work, and generated the next signature for the block.

Skills

Technical

- Working knowledge of Python, Bash, LATEX, Git, Docker, and AWS(currently hosting a game server). Orchestration and automation tools such as Kubernetes and Ansible. GNU/Linux (kernel configuration/optimization and hardening), RPM packaging and package build automation via openQA.

\mathbf{Other}

- I'm an analytical, detail-oriented, problem solver that enjoys breaking and hacking at technologies in order to determine how they're built. I am an excellent writer that meticulously documents my methodologies. I'm a team player that enjoys intelligent, stimulating collaboration on projects.