Schuyler Rosefield
schuyler@rosefield.org

Education

Northeastern University — Boston, MA
Bachelor of Science in Mathematics — Graduated Fall 2017
GPA: 3.49/4.0 — Honors: Dean's List

Relevant Coursework:

Computer Systems	Computer Architecture	Theory of Computation
Networks	Network Security	Graduate Cryptography
Numerical Analysis I, II	Graduate Algebra	Probability and Statistics

Work Experience

NGPVAN — **Somerville, MA**
Individual Contributor Software Engineer — *May 2015 - Present*

- Extended API to allow authentication with ephemeral bearer tokens following the OAuth2 spec
- Led project to audit how encryption was used within applications and to ensure that sensitive data was stored properly
- Created a library meant to allow easy to use secure implementations of AES-GCM for encryption and Scrypt for password hashing
- Extended two factor authentication offerings for our single signon provider to allow TOTP
- Manual web application penetration to identify xss, rce, csrf, and other vulnerabilities

Minnesota Department of Human Services — **Saint Paul, MN**
Application and Architecture Developer — *Summer 2013, 2014*

- Implemented a module to manage financial and case work information for new "Kinship" adoptions to interface between multiple statewide databases
- Consulted and interact with designers, testers, and end users regularly to ensure that the application met the particular needs of the agency

Personal Projects

- Designed a high performance big number library in C++11 to perform calculations on arbitrary-precision integers (github.com/Rosefield/BigNum)
- Created a distributed file store application using DHTs in asyncio Python (github.com/Rosefield/DHTFileStore)
- Made a program to identify samples of (distorted) audio from a known source (github.com/Rosefield/SongFingerprint)

Computer Skills

- C, C++, C#, x86 asm, Python, SQL
- Usage of git, agile development, and secure software development
- Up-to-date understanding of modern security best practices with particular interest in cryptography

Other Interests

- Completion of wargames (such as those on `https://overthewire.org`) and CTFs (third place at CSAW 2015 finals)
- Attending local cryptography research conferences
- Pair/group fire juggling with torches