

Mia Gil Epner

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github.com/miagilepner

EXPERIENCE

University of California, Berkeley *Research Assistant*

January 2016 - PRESENT

Assist UC Berkeley PhD candidate David Fifield with research relating to the development of Snowflake, a pluggable transport for the Tor Project.

Department of Defense *Software Engineer*

May 2016 - August 2016

Developed a user-space, UNIX data collection tool in C to support strategic intelligence requirements.
Created a program in Ruby to process encrypted, compressed, and serialized network communications.
Enhanced persistence mechanisms of user level applications.

Department of Defense *Software Engineer*

May 2015 - August 2015

Developed a program in C and Python in an embedded Linux environment to perform an integrity check of modules loaded on external machines for the purpose of computer network exploitation.
Expanded development capabilities on PowerPC architectures.
Transitioned the project's unit testing framework to Cmock.
Performed comprehensive unit tests on the large project.

Department of Defense *Software Engineer*

May 2014 - August 2014

Coded a custom auto-complete text form to query databases in Javascript.
Created a geocoder using the auto-complete form.
Mapped location records into an Elasticsearch database in Java, indexed the data, and provided server maintenance.

EDUCATION

University of California, Berkeley *B.A. in Computer Science and B.A. in Near Eastern Languages and Literatures.*

August 2013 - May 2017

GPA: 3.4

Relevant Coursework: Programming Languages and Compilers, Database Systems, graduate-level Internet and Network Security, Computer Architecture and Engineering, Operating Systems, Communication Networks, Algorithms, Computer Security, Data Structures.

SKILLS

Software development, embedded systems development, reverse engineering, test and documentation creation.

Top Secret/SCI Security Clearance.

LANGUAGES

C, Python, Java, Ruby, Bro IDS, MIPS, PowerPC, Javascript, CSS, Dojo libraries, JQuery

Fluent in Modern Standard Arabic.
Conversational in Egyptian Colloquial Arabic.

PROJECTS

Malicious Tor Hidden Service Directories

<https://github.com/miagilepner/Tor-HSDir-Research>
Parsed and analyzed 1 year of Tor consensus documents using Python to discover malicious hidden service directories.

The Fingerprintability of WebRTC

<https://github.com/miagilepner/DTLS-fingerprint>
Created a DTLS fingerprint generator using Bro, a network analysis language, to survey WebRTC connections.

Medium Propagation Multiplexing

<https://github.com/loriopatrick/EE122>
Constructed an algorithm for a receiver to decode signals from multiple transmitters on the same frequency.
Created a virtual environment in Java to deploy the algorithm.

PintOS

Project available upon request.
Implemented kernel threads, user programs, and a Unix file system in C for a lightweight OS.