

# Vi Grey

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## LANGUAGES AND TECHNOLOGIES

- Go, Python, Bash, Javascript, HTML, CSS, JSON, XML
- Linux, Unix, Windows, CentOS, RHEL, AWS, Unix Permissions, Cron, AngularJS, Node.js, TCP/IP, HTTP, TLS, SSL, Git, SQL, MongoDB, MySQL,  $\text{\LaTeX}$

## WORK EXPERIENCE

### Software Engineer, Technology Researcher, & Speaker

2014 - Present

Independent

Rochester, MN/New York, NY

- Created a research lab to actively develop skills and knowledge in technology and technology history
- Set up and taught Cryptography workshops in Minnesota, New Jersey, and New York
- Writes blog articles about technology, security, and information theory
- Gives presentations about projects and research

### Software Engineer & Information Security Engineer

(Contract) 2015

Excel Manufacturing

St. Charles, MN

- Developed internal sales and support ticket management application to improve productivity of sales and support teams
- Encrypted database information and hashed passwords with bcrypt to protect against data breaches
- Managed firewall rules and SIEM infrastructure to prevent and detect network and system infiltration attempts
- Set up AWS virtual servers to test application deployment before running those applications in production environments

### Web Developer

(Contract) 2015

Toymaker Television (Tymkrs)

Rochester, MN

- Created a website design for desktop with the security requirements of needing to be static and easily maintainable
- Optimized original website design aspects to reduce loading times by more than 75% and allow for dynamic content size

### Systems Administrator & Web Developer

2011 - 2013

Jon Hassler Theater

Plainview, MN

- Created a web-based box office ticket reservation system to improve work productivity
- Developed and maintained website, increasing page traffic by over 800% and average engagement time by over 500%
- Managed computer systems and networks to keep business operations functioning

## PRESENTATIONS

- **I Dream of Game Genies and ZIP Files – Hacking the NES** — HOPE Conference – 2018 – Manhattan, NY
- **Phishing for Root** — DEFCON 201 Technical Meeting – 2017 – Hoboken, NJ
- **Fair Results From an Unfair Coin** — NYC Python Lightning Talks – 2017 – Manhattan, NY
- **Attacking Your Two-Factor Authentication** — K-LUG Technical Meeting – 2017 – Rochester, MN

# PROJECTS

- UBAC** 2018
- Turing complete programming language and simple computer system that uses only 6 operations for calculations
- NESZIP** 2018
- Proof of concept tool that makes an NES ROM that is also a ZIP file that contains a copy of its own source code
- fairflip** 2017
- Coin flip simulation program written in Python for getting fair coin flip results from an unfair coin
- 3F.py** 2017
- Python script that takes 2 different types of files and creates a file that is a functioning version of both files at the same time
- Modem-Tap** 2017
- Network middleware audio engine written in Go that emulates a network connection though a Bell103 dial-up modem
- Personal BBS** 2017
- Online Bulletin Board Service written in Go — `telnet vigrey.com`
- Root Phisher** 2017
- Proof of concept security research Bash script that pretends to be the sudo password prompt and deletes traces of itself
- Latchbox** 2014-2017
- Password manager written in Go that uses a console based user interface
- ignis** 2015
- Scripting and templating engine written in Python for generating static websites
- White Rabbit** 2013
- Command line based python tool for time management
- rcube** 2013
- Python module that solves scrambled Rubik's Cubes
- datecalc** 2012
- Python module that can calculate the day of the week for any date (Ported to Go, Ruby, and Javascript)

# COMMUNITY WORKSHOP MEMBERSHIPS

- **DEFCON 201** — Makerspace – Hoboken, NJ
- **The Rabbit Hole** (Tymkrs) — Makerspace – Rochester, MN
- **K-LUG** — Linux User Group – Rochester, MN