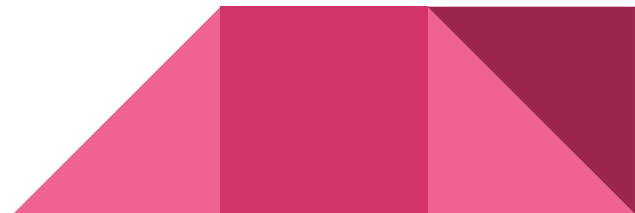


# Cyber@UC Meeting 97

// Fall 2019 Briefing //

# If You're New!

- Join our Slack: [cyberatuc.slack.com](https://cyberatuc.slack.com)
- **SIGN IN!** (*Slackbot will post the link in slack*)
- Feel free to get involved with one of our committees:  
Content   Finance   Public Affairs   Outreach   Recruitment   Lab
- NSA coming Oct. 16th
- Battelle Visiting us later this semester
- GE Aviation SOC visit in the works
- 





# Club Information

# What is Cyber@UC?

- Student run Cyber education focused organization
- Local chapter of OWASP
- Several student lead software and hardware projects
- Competitive hacking team
- Part of the reason UC remains an NSA accredited Center of Academic Excellence



# What are Cyber@UC's goals?

- Educate our members to be extremely competitive in the cyber workforce by giving them hands-on experience opportunities
- Connect our members to our industry partners who provide cyber COOPS
- Educate local high school students on cyber topics
- Support UC's NSA CAE certifications
- Do cool things that students wouldn't otherwise be able to do

**BATTELLE**

*THE VALUE OF PERFORMANCE.*

***NORTHROP GRUMMAN***



# Cyber@UC's Organization Structure

Outreach

Recruitment

Content

Finance

Lab

Public Affairs

# Committee Breakdowns - Content

- Make presentations for club meetings and outreach use
- Make/deliver cool demos
- Research what the cutting edge news/technologies/techniques
- If you can't learn then teach




# Committee Breakdowns - Outreach

Get service hours for teaching high schoolers how to hack

## Accomplishments

- Getting K-12 students interested in Cyber@UC
- Held events at Lakota East, Loveland, and Fairfield High Schools
- Visited SOC's at P&G, Siemens, and US Bank
- Brought in speakers from NSA, Discovery Labs, Battelle, and other local businesses
- Went to DEFCON

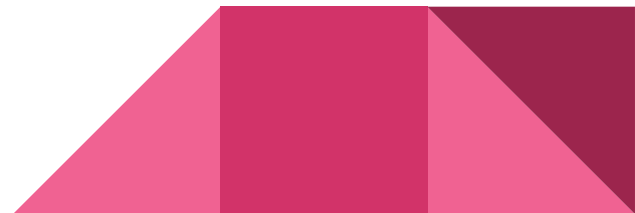
## Future Goals

- Planning more school visits this semester
  - Organizing speakers from Northrop Grumman and Battelle
- 



# Committee Breakdowns - Finance

- Manages Cyber@UC's finances
- Organizes fundraising events
- Makes sure we can actually hold events



# Committee Breakdowns - Public Affairs

- Manages Social media
- Hype crew
- Keeps folks informed about us



# Committee Breakdowns - Lab

- Use hardware to do cool stuff
- Take care of lab and server room
- Hold weekly lab activities for members
- Coffee + Python = power over the mortals



# Committee Breakdowns - Recruitment

- Meet new people and tell them about Cyber@UC
- Organize recruitment events
- Plan non-technical club events like board game nights
- Greg™



# Schedule

- Monday Evenings 6:00 PM - Lab
  - Come together for the hivemind
  - Work on cool projects
- Wednesday Evenings 6:30 PM - General Meetings
  - Bask in the hivemind's knowledge
- Saturday Mornings 11:00 AM - CTF Meetups
  - Starts after Labor Day™
  - Go forth and bring glory to the hivemind





What is Cyber?

# Cyber

Cyber - Generalization for a lot of security related jobs in tech including:

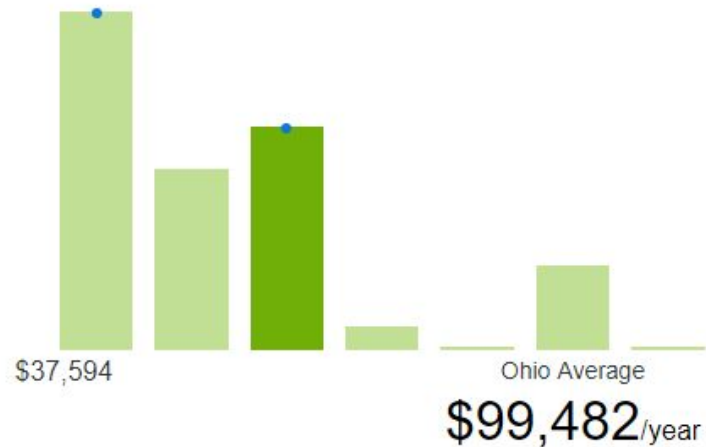
- Forensics
- Network security
- Penetration testing
- Security Analysis
- Security Architecture and Design
- Cyber Development
- Keanu Reeves in The Matrix
- etc.



# Money

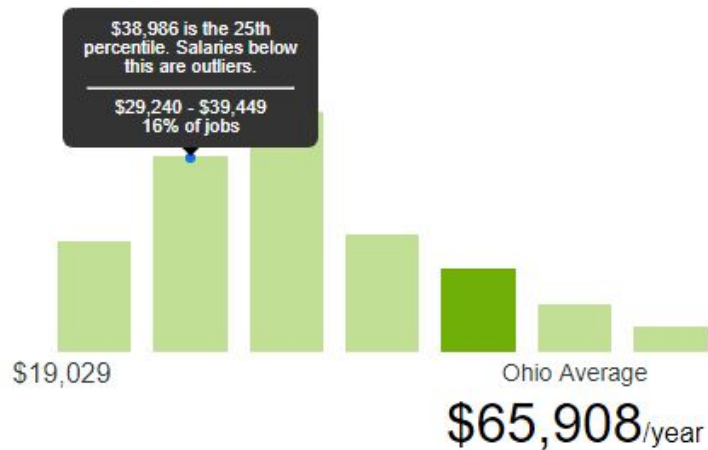
## Cyber Security Salary in Ohio

Yearly Monthly Weekly Hourly



## Computer Science Salary in Ohio

Yearly Monthly Weekly Hourly





# Job Security

## Cincinnati, OH-KY-IN

TOTAL CYBERSECURITY JOB OPENINGS ⓘ

1,471



TOTAL EMPLOYED CYBERSECURITY  
WORKFORCE ⓘ

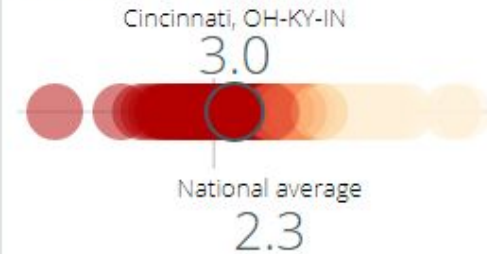
4,410



SUPPLY OF CYBERSECURITY WORKERS ⓘ

Very Low

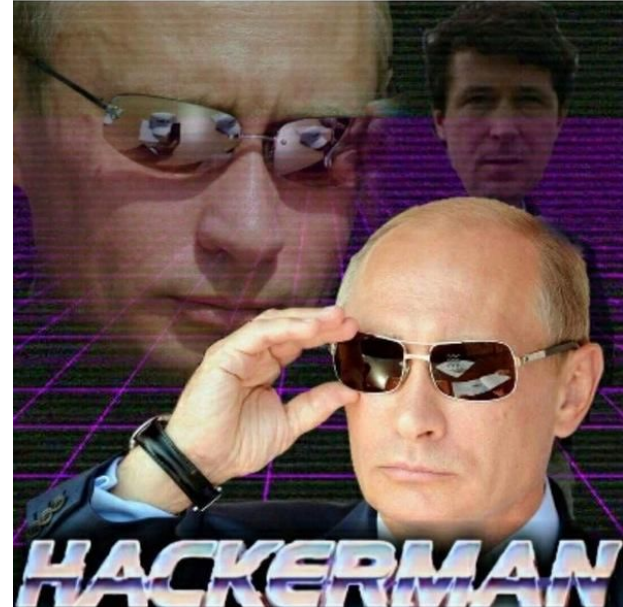
CYBERSECURITY WORKFORCE  
SUPPLY/DEMAND RATIO



# Job Enjoyment

- How many jobs have training sessions where you hack video games?

When you put 'password' in the password field and it works.

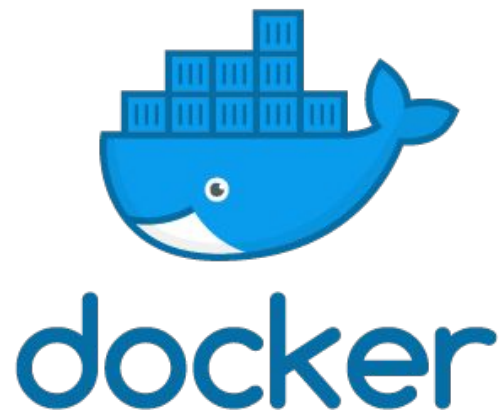




# Projects and Efforts

# CTF-TOOL (public)

- Automated setup tool for hacking competitions
- Working on creating new randomized competitions
- CLI Python3 tool
- Used for the 2019 Rev UC CTF and several high schools
- Utilizes docker, CTFd, and several other open source projects



# Range-Master (still in development)

- Automation of VM deployment and script running
- Differs from existing tools by utilizing cross-architecture emulation and high introspectability of machines running
- Plan to integrate with CTF-TOOL to create randomized machine exploitation based CTF's
- Plan to use for Franco's Cyber Defense Contest at end of semester
- Libvirt + Python3 CLI/WebApp



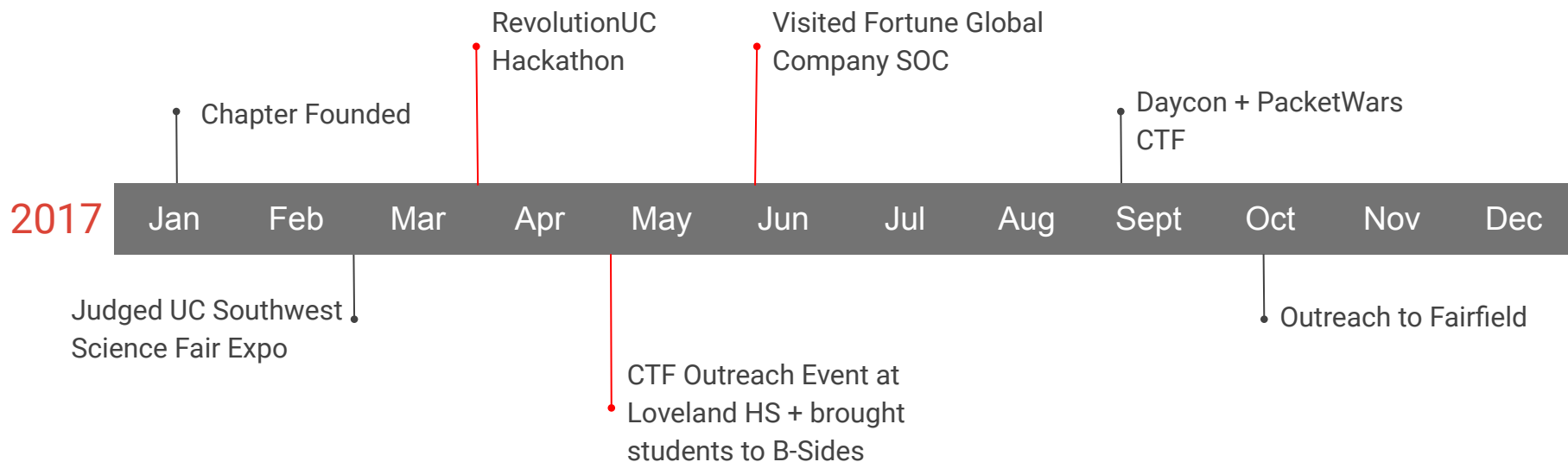
# Security Operations Center / Lab

- Self-hosted cloud technology
  - Secure virtualized application environments
  - Flexible software defined networking
  - Avoid dependency issues, keep servers updated with latest security patches
- Open source applications
  - Low/no cost to implement
  - Easier to modify and improve upon
  - Communally beneficial
- Automated configuration
  - Servers, routers, applications
  - Save configurations for entire setup
  - Allows for modular management of lab functions

# Efforts

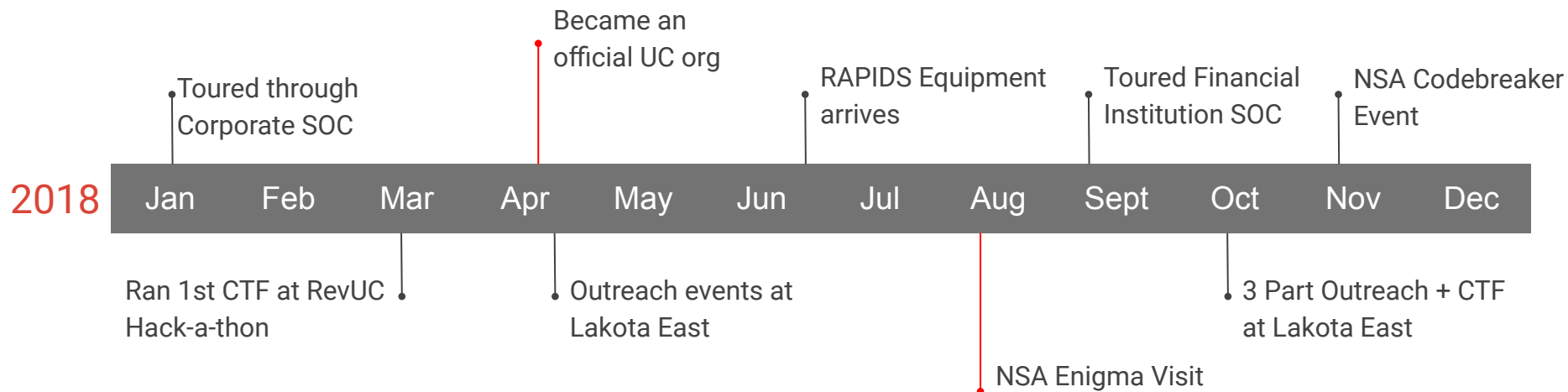
- Website / Livestreams / Content
- DEFCON / Bsides
- Highschool outreaches (multiple per year)
- Visits to/from Industry (multiple per year)
- CTF Events

# Cyber@UC Timeline



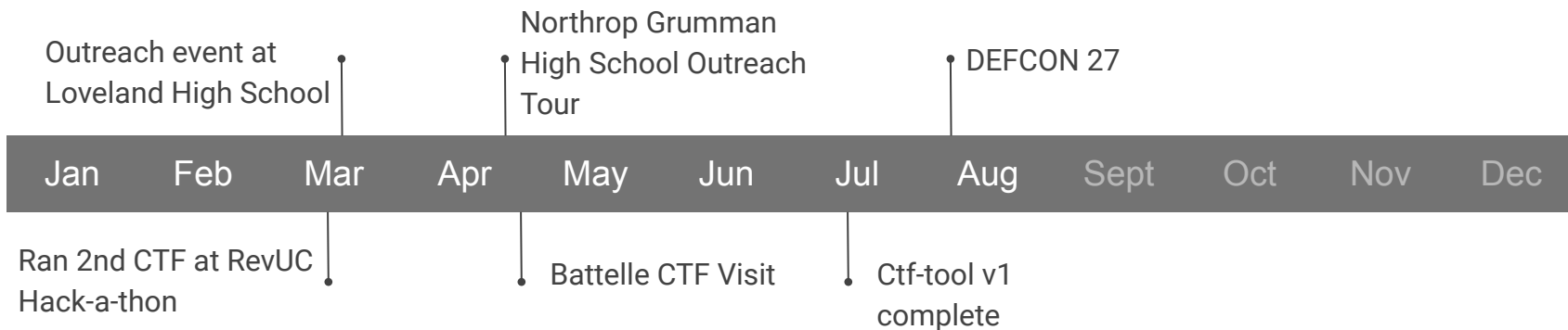


# Cyber@UC Timeline cont.



# Cyber@UC Timeline cont.

2019



# Closing Demo

