

# UMBC Cyber Defense Team

FIRST MEETING/CLASS PRESENTATION  
2018-2019





# Welcome to the UMBC Cyber Defense Club!

- Also called the UMBC Cyber Dawgs!
- A student run organization since 2009.
- We're a group of students that share a passion for and recognize the importance of computer security

such hack



much cyber



# Some Introductions

- President: Kevin Bilzer
  - Comp Sci, Fall 2019
  - Network Security, Dev-Ops
- Vice President: Zack Orndorff
  - Comp Sci and Math, Spring 2019
  - System Administration, RE
- Secretary: Andrew Sciandra
  - Comp Sci, Fall 2019
  - Web Application Security
- Treasurer: Amina Mahmood
  - Comp Sci, Spring 2021
  - Windows, Malware Analysis
- Historian: RJ Joyce
  - Masters in CS, Spring 2020
  - Malware Analysis, Data Science
- Technical Advisor: Seamus Burke
  - Comp Sci, Spring 2020
  - Vulnerability Research



# So...what is computer security?

- The protecting of computers, networks, programs and data from unintended or unauthorized access, change or destruction
- Basically keeping the bad guys out, while keeping everything up and running
- Several different types of computer security
  - Application Security
  - Network Security
  - Information Security
  - Offensive Security
  - And much, much more!!





# Why Computer Security?

- Highly sensitive data is accessed, stolen, and/or used every day
- Over 480 million records leaked in 2015 alone
- Many of these hacks could have been mitigated with proper training and good practices
- The need for computer security is crucial, from enterprise & pop shops!
- Job market is always looking for cybersecurity experts
- Oh, AND it's suuuuper fun to learn about.







# How Do the Cyber Dawgs Approach This?

- There are lots of ways to learn about computer security...
- ...but we believe in approaching it through multiple tracks.
- We have three main tracks that we follow throughout the year:
  - Education + Hands-on
  - Competition Participation
  - Industry Exposure



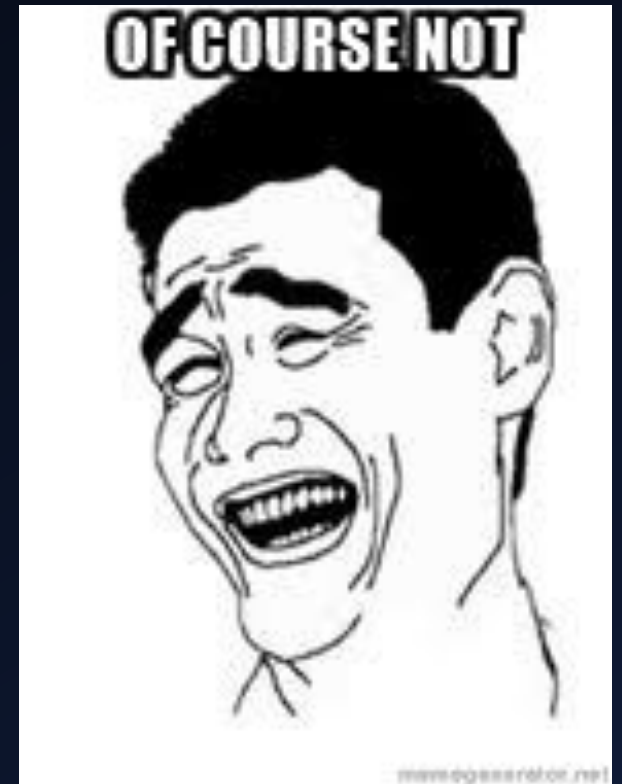
# Track #1: Education and Hands-on

- Our regular club meetings: every Wednesday; 7-9 in PUP105
- We go over lots of relevant and important topics pertaining to cyber security
- We have a schedule for this semester!
  - Check it out on our website: <http://umbccd.umbc.edu/>
- Some stuff we'll be covering this semester:
  - Web exploitation
  - Networking basics
  - Offensive security

# This all sounds super cool...but do I need to have experience coming in?



- No experience required!
- Schedule is tailored for beginners and veterans alike.
  - Having trouble/can't find a solution? Ask us!
  - Bored/already know it? ASK US!!!
  - This is a club, not a lecture hall, so even if you already know the topic, please come by and hang out, and help people if you are inclined.
- This semester, we also have CMSC491/791!
- Most of our resources are available on our GitHub as well: <https://github.com/UMBCCyberDawgs>







## Track #2: Competition Participation

- We encourage EVERYONE to do at least one competition while they're part of the Cyber Dawgs
  - Formal requirement for the 491/791 class
- Lots of different types of competitions available!
- We've done pretty well in the past... join us!
  - NCCDC Champions 2017
  - CSAW North American finalists 2017 (finished 7th)
  - CSAW North American undergrad region 2016 16th





## Some Upcoming Competitions

- PicoCTF is always running, it's an introductory CTF
  - New version comes out: 9/20/18 - 10/12/18 <https://picoctf.com/>
- CSAW CTF (Cyber Security Awareness Week): Qualifiers begin September 14<sup>th</sup>!
  - We'll be playing as a group. This is one of the harder collegiate-level CTFs, but feel free to join anyway!
- CyberSkyline Metropolis CTF (hosted at UMD College Park)
  - Teams of 4, we'll be organizing in the coming weeks. October 6, 2018
- Others: Kaizen, NCL, Parsons CTF, CCDC (of course!)



## Oh...and WE are hosting our own CTFs!

- October 20<sup>th</sup>: Cyber Defense Exercise!
  - Virtually required to make the CCDC team -- show off your knowledge and drive (or learn if you don't have knowledge yet)
- March 2<sup>nd</sup>: DawgCTF!
- Great events for beginners and veterans alike
- There will be prizes for top performers!!!
- There will also be some companies to network with!



## Track #3: Industry Exposure

- The field of computer security is ever changing
- It's important to know what industry is using today!
- We'll have some industry folks come in and give talks, demos, labs, and host competitions!
- Our current sponsors:
  - Parsons
  - Tensley Consulting



TENSLEY CONSULTING, INC.  
*Engineering Excellence for Mission Success*



# Some Upcoming Conferences

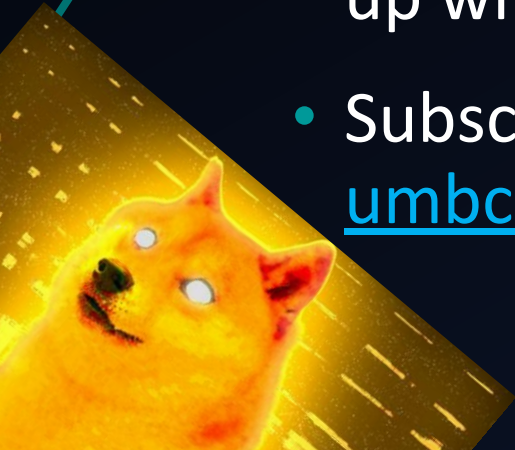
- BSides DC
  - Like \$20, October 26th - 28th, 2018
  - Tickets are unfortunately all sold for this year, but we recommend it for next year
- ShmooCon DC
  - January 18th - 20th, 2019
  - Probably the best security conference on the East Coast, but it's like \$100 and tickets are hard to get
- BSides Charm
  - Spring 2019 - Like \$20





# YEEHAW!!! I'M TOTALLY HOOKED!

- Remember: our regular club meetings are Wednesdays from 7pm-9pm in PUP105.
- Get on our slack channel! <https://umbccd.slack.com>
  - This is really the best way to communicate with us, so get on this ASAP!
- Check out our website to see our schedule, resources page, and link up with the group at <http://umbccd.umbc.edu/>
- Subscribe to our mailing list: send an email to [umbccd-group+subscribe@umbc.edu](mailto:umbccd-group+subscribe@umbc.edu) to join (umbc email or

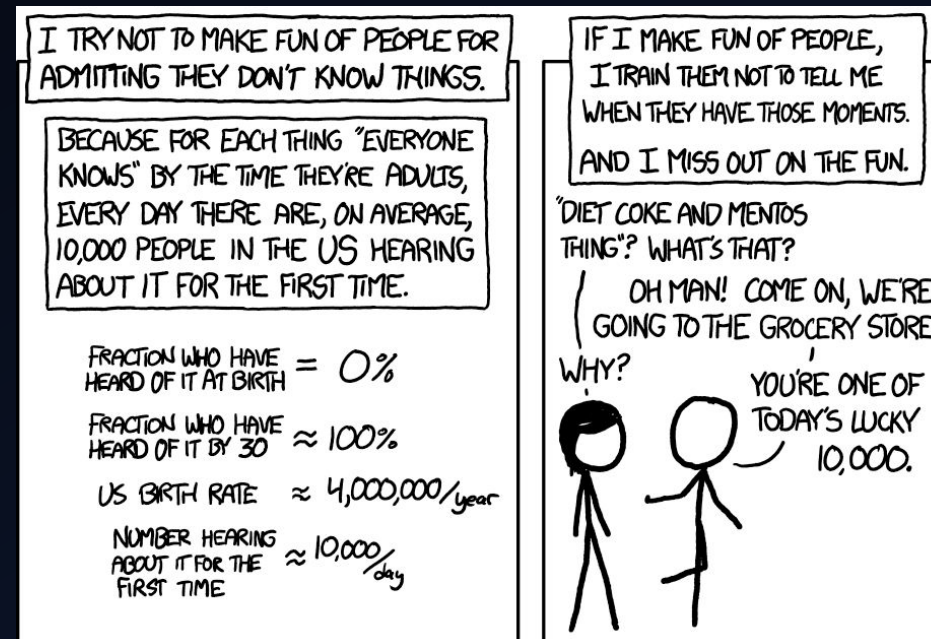






# Now, a few more things to note (courtesy of our club alumni)

- Learning cyber security is hard, but we're here to help!
  - Meetings are a starting point
  - Requires dedication and time
  - Don't hesitate to ask questions - we are here to help!



XKCD 1053,  
Randall  
Munroe



# OH...AND THIS IS IMPORTANT

- While we are a cyber defense team, the tools and techniques we will be going over are used to break into a system/network
- So unless it is YOUR server, computer, virtual machine, or service, or unless you have EXPLICIT and COMPLETE permission to do so...
- DO NOT USE ANY OF THESE TOOLS OR TECHNIQUES ON A SYSTEM THAT YOU DON'T HAVE COMPLETE AUTHORIZATION TO DO SO
- If you don't adhere to this, some of the legal ramifications include - but are not limited to-the following:
  - Expulsion from UMBC
  - Being charged for either a misdemeanor or a felony, depending on the severity
    - Fines up to \$100,000 for misdemeanors, up to \$250,000 for felonies
    - Jail time up to 1 year for misdemeanors, up to 10 years for felonies
  - AND THIS IS JUST THE FEDERAL LEVEL.



What questions do you have???

ALRIGHT, NOW IT'S TIME FOR SOME AWESOMENESS  
COURTESY OF OUR HISTORIAN, RJ!!



Alright, enough chit chat  
LET'S SHOW YOU GUYS SOME  
COOL STUFF YOU CAN DO WITH  
WHAT YOU LEARN HERE!

