

# ALUMNI SPOTLIGHT



CHAMPLAIN  
COLLEGE

## Meet the Malware Queen

Corrie Erk, B.S. '12; M.S. '15

Corrie Erk's boss at NBC says he'd like to clone her. She's committed, she learns fast, she handles stress, and, as Erk puts it, chuckling ominously, "other people's bad days are my good days." In other words, problem solving and troubleshooting are her favorite forms of exercise.

Knuckles crack. Hackers beware.

Erk wanted to be some kind of scientist from age seven. Using science to solve crimes was appealing but it wasn't until she got to Champlain and heard the term digital forensics that cyber security became her passion. Champlain is one of 45 schools in the country that offer a major in digital forensics. "Everyone else had a lot of experience," she says, remembering her freshman insecurities. "But I'd never taken a computer apart. I barely knew what a hard drive was." So she jumped on the Champlain learning curve and got a job at the college Help Desk. Total immersion. By junior year she had an internship at Mass Mutual Financial in Massachusetts doing forensics. By graduation, she had a job offer.

"It's not all NCIS," Erk says. "Digital Forensics is still a relatively new field. Most firms don't even know they need cyber security until there's a hack." Learning on the job, Erk got her Master's in Digital Forensics and Cybersecurity from Champlain in 2015 and emerged a full-fledged Malware Specialist. This is work that requires a lot of teamwork. Everyone on the team has a specialty. And there's a lot of respect for that specialty. While the fundamentals of field don't change much year to year, the technology changes constantly. "Bad guys find new ways to breach security. It's our job to find out what they are doing and prevent damage."

How does she do it? Erk creates a safe environment and runs malware to uncover various indicators. She may, for example, see that someone in the company is reaching out to an IP address in Russia and check to make sure that information is not being leaked. This can get awkward when it leads to an employee getting fired-- especially when you see that employee two stools down at the local bar. Erk's work usually does not involve getting the bad guys. It's more about response and prevention.

NBC's Sports division has domestic broadcasting rights to the Olympics for the next 18 years. When the company needed a security team to cover the winter Olympics in Russia in 2014, guess who manned the home office 24/7? And when they needed a satellite security office for the summer olympics in Brazil in 2016, Erk was a senior member of the team deployed in Rio for five weeks. She is currently preparing for the winter 2018 Olympics in South Korea.



"It's a lot of stress," Erk admits. "In Russia we were on high alert for malware; Brazil has a reputation for ATM fraud and phishing emails containing malicious links." When an "incident" occurs, the lead investigator pulls the team together. Erk does forensics on infected devices. Teammates work on checking networks and tracing data exfiltration. Most of the time, the crime is not turned over to law enforcement. "If you bring in the police or the FBI," Erk explains, "you may be in danger of having the broadcast shutdown. The crime could go public and affect prevention."

"This job involves constant learning," Erk reports. Doctors have hundreds of years of research behind them. We are still learning how to do things in this field. There's what you learn from a textbook, and then there's what you learn on the job. The technology changes faster than our security protocols."

Erk learned a lot about flexibility at Champlain. And she appreciates the strong emphasis on ethics and social justice. "There are many opportunities to abuse the information we have access to," she says. "It's important to have a strong sense of ethics and boundaries."

Each sector has different security needs, and each company within those sectors has a different culture and different values. Law firms, government agencies, financial companies all have different security needs. "There's something new everyday. Which is good," she laughs.

"Because I get bored easily."

