Student Participation in the Mountain West Cyber Challenge (MWCC)

Team members: Sy Pretto, Jason Velvick, Warren Kankwe, Adrian Rodriguez, and La'Ron Latin

On January 10th, 2026, a group of second-year cybersecurity graduate students from the University of Denver participated in the Mountain West Cyber Challenge (MWCC) under the team name *DU_Hack_the_Planet*. This one-day Capture The Flag competition challenged students to solve realistic cybersecurity problems across multiple technical domains in an 8-hour time window.

The team engaged with challenges from web security (including SQL injection and CSRF), cryptography, and network forensics using PCAP analysis. Team members applied hands-on skills such as crafting and analyzing HTTP requests, identifying weaknesses in custom encryption implementations, brute-force and dictionary-based password cracking, and extracting indicators from network traffic, while collaborating to divide tasks and solve problems efficiently.

Student reflections emphasized the importance of practice, repetition, and patience in developing effective CTF skills, with participants noting measurable improvement compared to prior competitions. The team observed how minor implementation flaws often created significant security weaknesses, reinforcing key principles taught in coursework. Overall, the experience strengthened technical confidence, teamwork, and the ability to apply theoretical knowledge to real-world cybersecurity scenarios.

Participation in MWCC provided valuable experiential learning for the cybersecurity program and reinforced student interest in continued engagement with hands-on technical challenges.

Raw feedback from team members:

<u>Jason</u>

I worked on SQL injection and was able to get through the challenges in that category. I would say the main skill I strengthened was reading and trying to send HTTP requests via burp suite for the CSRF challenges, though I wasn't able to get very far with those in the end. I gained the realization that a lot of practice and repetition is needed to get good at a lot of the types of challenges in CTFS like MWCC but I do get better each time I do one.

<u>Adrian</u>

I worked mostly on crypto and PCAP challenges, breaking custom encryption and pulling clues from network traffic. It definitely helped me get better at spotting weak crypto and staying patient when things didn’t work right away. I was surprised how often small implementation mistakes made the biggest difference. Overall, it was a solid confidence boost and a fun way to apply what we’ve been learning.

Warren

I worked on cryptography challenges utilizing brute-force, dictionary based password cracking and script writing for automation. It was interesting to see how practice better positioned me to understand the competition landscape and I found the challenges interesting in their varied difficulty levels. This competition encouraged me to find more avenues to practice in class and in lab skills on real world applications.