These writeups, authored by Peyton Braun, are designed to guide you through the process of solving all the challenges from the Inaugural University of Wisconsin – Stout Cybersecurity Capture the Flag (CTF) event.

This event was hosted by UW-Stout CyROC x CCDL

I hope these writeups help you gain a deeper understanding of each challenge and how to overcome them.

CTF Challenge Writeups

Each writeup will cover the following aspects of the challenge:

1. **Challenge Overview**: A brief description of the challenge.
2. **Steps to Solve**: Detailed steps, tools used, and reasoning behind each step.
3. **Tools and Methods**: Explanation of why specific tools and methods were chosen.
4. **How It Works**: Insight into the underlying concepts and the thinking process.

Challenge: "Jeans"

Challenge Overview:

This challenge involves decoding a flag encoded in DNA sequences, hinted by the name "Jeans" (a play on "genes").

Challenge Description:

- Have you worn some lately?

Steps to Solve:

1. **Copy the Encoded DNA Sequence**:
    1. TGATAGTGTGATTAGTCATAGGCTACGTATGCTTAGAGGGAGCTAGCGCACCGTTGCAGTCACTCGCATGAGCGTACATCAATTTGTTGCGAGTCTAGATCAATGATTAGTCGTGACACCCTCACG
2. **Use a DNA Decoder**:
    1. Navigate to earthsciweb.org DNA Writer.
    Paste the DNA sequence into the tool to decode it into plain text.
3. **Retrieve the Flag**:
    1. The decoded text is the hidden flag.
4. **Decoded Flag:**
    1. STOUTCTF{QfT8PE2rHjxRkbpHmC6OJp14cW6xHy7N}

Tools and Methods:

- **Tool Used**: DNA writer tool.
- **Why This Method**: This tool specializes in interpreting DNA sequences and converting them into readable text.

How It Works:

DNA sequences encode information using the nucleotide bases A, T, C, and G. Tools like the DNA writer map sequences to corresponding characters or plaintext. This challenge demonstrates how biological encoding can be used for cryptography.