Jackson State Community College continues to encourage our students to compete in competitions that can help students experience real world scenarios in Cyber Security. The CodeBreaker Challenge competition encourages analytic problem solving and uses what they learn in the classroom. Our students at Jackson State have created their own Discord Channel to allow them to discuss the challenge and work to solve. Each student receives a slightly different set of challenge binaries and associated files, making it unlikely for one person's solution to work for someone else. However, the files are similar enough to where people can work together and develop the solution to their respective challenge instances as a team.

Jackson State students have participated in the NSA Codebreaker challenge in 2019, 2020, and 2021. In 2019, we had 8 students participate and finished at 96th overall with 631 schools competing. In 2020, we had 16 students participate and finished 56th overall with 452 schools participating. In 2021, we had 17 students participate and finished 142nd overall with 631 schools participating. This is the 3rd year we have participated in the CodeBreaker Challenge, and we encourage our students to participate. We have seen steady improvement in the number of students the participate and in their success. 

NSA Codebreaker Challenge (nsa-codebreaker.org)
## Overall Progress

### Show 50 entries

<table>
<thead>
<tr>
<th>University</th>
<th>Task 1</th>
<th>Task 2</th>
<th>Task 3</th>
<th>Task 4</th>
<th>Task 5</th>
<th>Task 6</th>
<th>Task 7</th>
<th>Task 8</th>
<th>Task 9</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jackson State Community College</td>
<td>12</td>
<td>6</td>
<td>2</td>
<td>1</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1,160.00</td>
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</tbody>
</table>

Showing 1 to 1 of 1 entries (filtered from 452 total entries)

## Participation

### Show 10 entries

<table>
<thead>
<tr>
<th>University</th>
<th>Players</th>
<th>First Solution</th>
<th>Last Solution</th>
</tr>
</thead>
</table>

Showing 1 to 1 of 1 entries (filtered from 452 total entries)

## Overall Progress

### Show 10 entries

<table>
<thead>
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<th>Rank</th>
<th>University</th>
<th>Task 0</th>
<th>Task 1</th>
<th>Task 2</th>
<th>Task 3</th>
<th>Task 4</th>
<th>Task 5</th>
<th>Task 6</th>
<th>Task 7</th>
<th>Task 8</th>
<th>Task 9</th>
<th>Task 10</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>142</td>
<td>Jackson State Community College</td>
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<td>5</td>
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<td>1</td>
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<td>0</td>
<td>0</td>
<td>536.00</td>
</tr>
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</table>

Showing 1 to 1 of 1 entries (filtered from 631 total entries)

## Participation

### Show 10 entries

<table>
<thead>
<tr>
<th>University</th>
<th>Players</th>
<th>First Solution</th>
<th>Last Solution</th>
</tr>
</thead>
</table>

Showing 1 to 1 of 1 entries (filtered from 631 total entries)
NSA Codebreaker Challenge

2019 Challenge Scenario
Tech savvy terrorists have developed a new suite of communication tools that are being used for attack planning. Recent intelligence suggests the terrorists are communicating via TerrorTime, a custom Android secure messaging app.

Your mission is to:
1. Reverse engineer and develop new exploitation capabilities against TerrorTime to enable message spoofing, user masquerades and message decryption
2. Discover and thwart future attack plans!

Who: U.S. Based Academic Institutions
What: Annual Cyber Challenge Event
Where: Register at https://codebreaker.ltsnet.net
When: Mid-September, 2019 – January 9, 2020
NSA’s annual Codebreaker Challenge offers students a closer look at the type of work done at NSA and provides the opportunity to develop skills needed to achieve the Agency’s national security mission. The problems touch on skills like software reverse engineering, cryptanalysis, exploit development, blockchain analysis, and more. It gives students a hands-on opportunity to develop their reverse-engineering/low-level code analysis skills while working on a realistic problem set centered around the NSA’s mission.

The Challenge is open now and will run until a date late in December. Anyone with an email address from a recognized U.S. school or university may participate. While the challenge is intended for students, faculty are encouraged to participate as well. Furthermore, the site was designed to make it easy for those faculty interested in incorporating the challenge into their courses to do so (see the additional FAQ entries below.) Use your main Jackson State email address to register, not elearn.

The 2021 Codebreaker Challenge consists of a series of tasks that are worth a varying amount of points based upon their difficulty. Schools will be ranked according to the total number of points accumulated by their students with the current ranking shown on a leaderboard. Solutions may be submitted at any time for the duration of the Challenge.

While not required, it is recommended that you solve tasks in order, since they flow with the storyline. Later tasks may rely on artifacts / inputs from earlier tasks. Each task in the 2021 challenge will require a range of skills. You will need to call upon all of your technical expertise, your intuition, and your common sense.

NSA provides some helpful resources to get you on the right track with the 2021 Challenge. The list as a starting point. It’s not exhaustive, and you’ll definitely need to do additional research on your own. There are things in this list that aren’t actually part of this year’s challenge. Once you register, you will be able to join the Community of Practice Discord server for the 2021 Codebreaker Challenge. NSA will also hold two technical talks this fall, giving a chance to hear from some of NSA’s experts. We will create our own Discord Channel and work with students from the Server Administration class. We will also do this in conjunction with SkillsUSA to help prepare for state competitions in the spring.

You will receive course credit for participating in the challenge. To do that, register for the challenge, then share your progress with me by entering my email address rcallihan1@jcc.edu into your “followers” list.

Prof. Callihan