| **Group** 13 | *Spring 2024 Design Challenge* |
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| **Major:** | **Team members:** |
| *ITC* | *David Kajuna* |
| *CEG* | *Joshua Andrews* |
| *CS* | *Jason Bynum* |
| *ITC*  *CS* | *John Armlovich*  *Kennedy Eziolise* |

**Design Constraints**

| Const No. | Constraint |
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| 10 | Wifi, cellular data, and Bluetooth shall not be used as transmission mediums. |
| 20 | The total cost of materials must be 300 USD or less. |
| 30 | No electrical tethers shall be connected to the Empire Raspberry Pi |
| 40 | The complete solution must be demonstrated in the last week of the Fall 2024 semester. |
| 50 | The Rebel Server must be a minimum of 5 meters from the Raspberry Pi. |
| 60 | The system must be performed in the basement of the Russ Engineering Center. |
| 70 | The full system implementation must fit in the testing room of the Russ basement. |
| 80 | The development group shall include at least 4 members of different engineering disciplines. |
| 90 | The system must be able to perform at ambient temperature (60-80 degrees Fahrenheit). |
| 100 | No individual unit of the system shall weigh more than 10 pounds. |
| 110 | All electrical units of the system shall use standard 120VAC 60Hz as their input |

Definitions:

Raspberry Pi: A small single-board microcontroller that allows programming for multiple uses.

Rebel Server: The computer program hosting a website where images will be displayed.

Medium: a tool used to deliver or store data.

Mobile application: The application that would be implemented to decipher red circles in 10 death star images.

VAC: Volts of Alternating Current