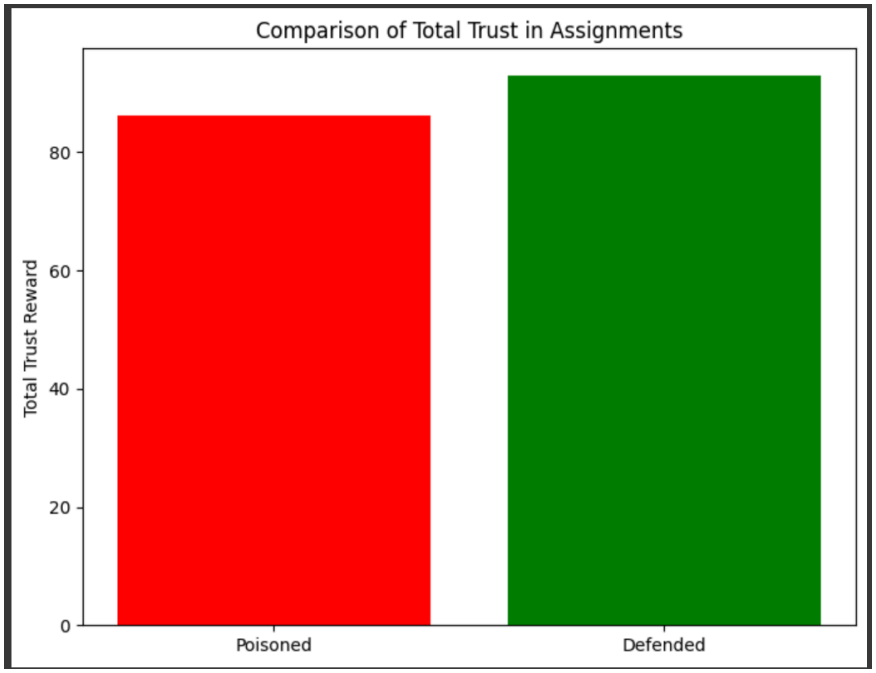
Preliminary Results

```
Baseline QUBO Assignment Matrix
[[0 0 0 0 1]
 [1 0 0 0 0]
 [0 0 0 1 0]
 [0 0 1 0 0]
 [0 1 0 0 0]]
```

```
Poisoned QUBO Assignment Matrix
[[0 0 0 1 0]
 [0 1 0 0 0]
 [0 0 1 0 0]
 [1 0 0 0 0]
 [0 0 0 0 1]]
```

```
Defended QUBO Assignment Matrix
[[0 0 0 0 1]
 [0 0 0 1 0]
 [0 0 1 0 0]
 [0 1 0 0 0]
 [1 0 0 0 0]]
```

- Assignment Matrices
    - Assignment matrices generated under baseline, poisoned, and defended trust scenarios using NEAL sampling. The matrices show agent-to-task allocations optimized under different trust conditions



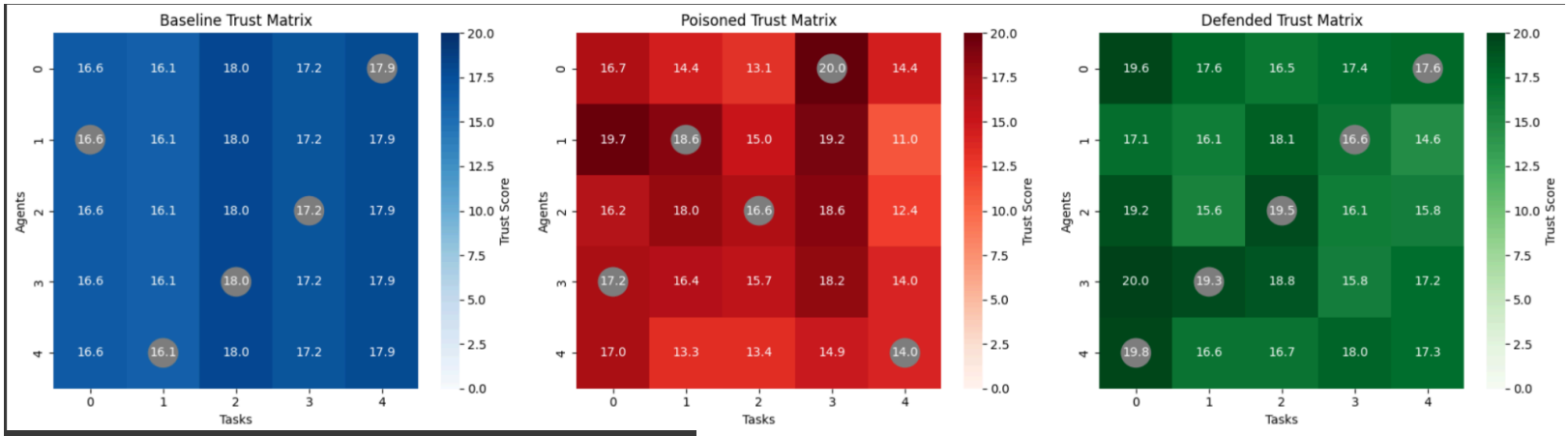
- Total Trust Reward Comparison
    - Bar chart comparing total trust reward between poisoned and defended scenarios. The defended approach recovers significant trust reward relative to the degraded case

```
Baseline Trust Matrix
[[0.97209373 0.94761353 0.88724676 0.99233005 0.84928413]
 [0.97209373 0.94761353 0.88724676 0.99233005 0.84928413]
 [0.97209373 0.94761353 0.88724676 0.99233005 0.84928413]
 [0.97209373 0.94761353 0.88724676 0.99233005 0.84928413]
 [0.97209373 0.94761353 0.88724676 0.99233005 0.84928413]]
```

```
Poisoned Trust Matrix
[[0.5688474  0.48941461 0.4463877  0.68005262 0.48861762]
 [0.66956451 0.63120195 0.51011491 0.65209987 0.37243654]
 [0.55143457 0.61169281 0.56447331 0.63183647 0.42028942]
 [0.58336412 0.55730781 0.53527882 0.61910026 0.47538505]
 [0.57668675 0.4520083  0.45445525 0.50615094 0.47589406]]
```

```
Defended Trust Matrix
[[0.7688474  0.68941461 0.6463877  0.68005262 0.68861762]
 [0.66956451 0.63120195 0.71011491 0.65209987 0.57243654]
 [0.75143457 0.61169281 0.76447331 0.63183647 0.62028942]
 [0.78336412 0.75730781 0.73527882 0.61910026 0.67538505]
 [0.77668675 0.6520083  0.65445525 0.70615094 0.67589406]]
```

- Trust Matrices
  - Inputs to the optimization, baseline shows initial trust levels, poison shows degraded trust from attacks, and defended shows partial recovery.

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Total Trust Reward (Baseline): 85.68018091663247
Total Trust Reward (Poisoned): 86.31644050831443
Total Trust Reward (Defended): 92.91171910288735
```

- Heatmaps of Trust Matrices
  - The poisoned matrix shows degraded trust scores system-wide, while the defended matrix partially restores trust closer to baseline levels