

GIGL

Group 3 Project - Tutorial

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GMU CYSE 650 Cyber Risk Modeling and Analysis Tools

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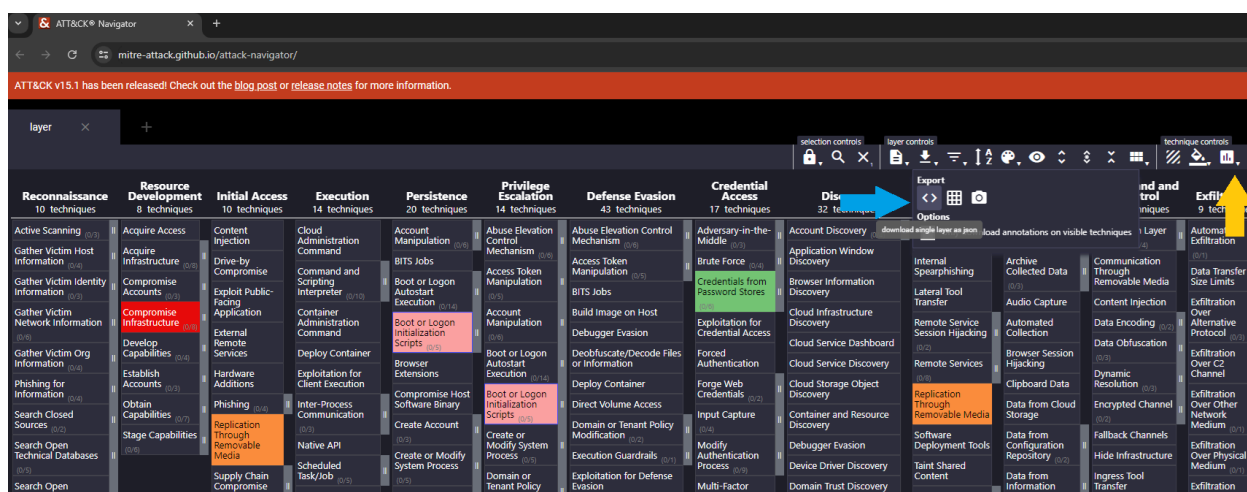
Software that transforms an execution graph path from MITRE ATT&CK into Bayesian representation using the UnBBayes API, incorporating the capacity to elicit and measure uncertainty in the new model representation

1. Setup Endpoint

Browse to UnBBayes modeling framework <https://sourceforge.net/projects/unbbayes> and install. The operation of the tool is outside the scope of this tutorial

2. Prepare Input

Browse to MITRE ATT&CK Navigator, <https://mitre-attack.github.io/attack-navigator> and generate input to GIGL by creating a Layer, highlighting Techniques, assigning each a Score (yellow arrow) and Exporting to JSON (blue arrow). The remaining operation of the web app is outside the scope of this tutorial



3. Download Repository

```
git clone https://github.com/chrimson/GIGL.git
cd GIGL
```

4. Enable Required Dependency

```
pip install pgmpy
```

5. Execute

```
python gig1.py mitre.json bayes.net
```

Bayesian Network model is valid

Bayesian Network exported

6. Examine Result

Run UnBBayes and load the output Bayesian Network file

