

# Privacy-Preserving AIS for Network Security

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- Variation of ARTIS[1]
- Graph consists of single node
- Detectors and antigens consist of binary strings
- Antigen: Encoding of incoming connection

- Broadly consists of the following steps:
  - Generate random set of detectors
  - Tolerization: Replace those detectors that are affine to self strings
  - Collectively classify incoming connections to network using the detectors
  - If detectors are activated (exceed threshold), commit to memory

# Algorithm



# Next Steps

- Come up with shared structure for detectors, antigens
- Finalize dataset(s) to be used



Steven A Hofmeyr and Stephanie Forrest.

Architecture for an artificial immune system.

*Evolutionary computation*, 8(4):443–473, 2000.