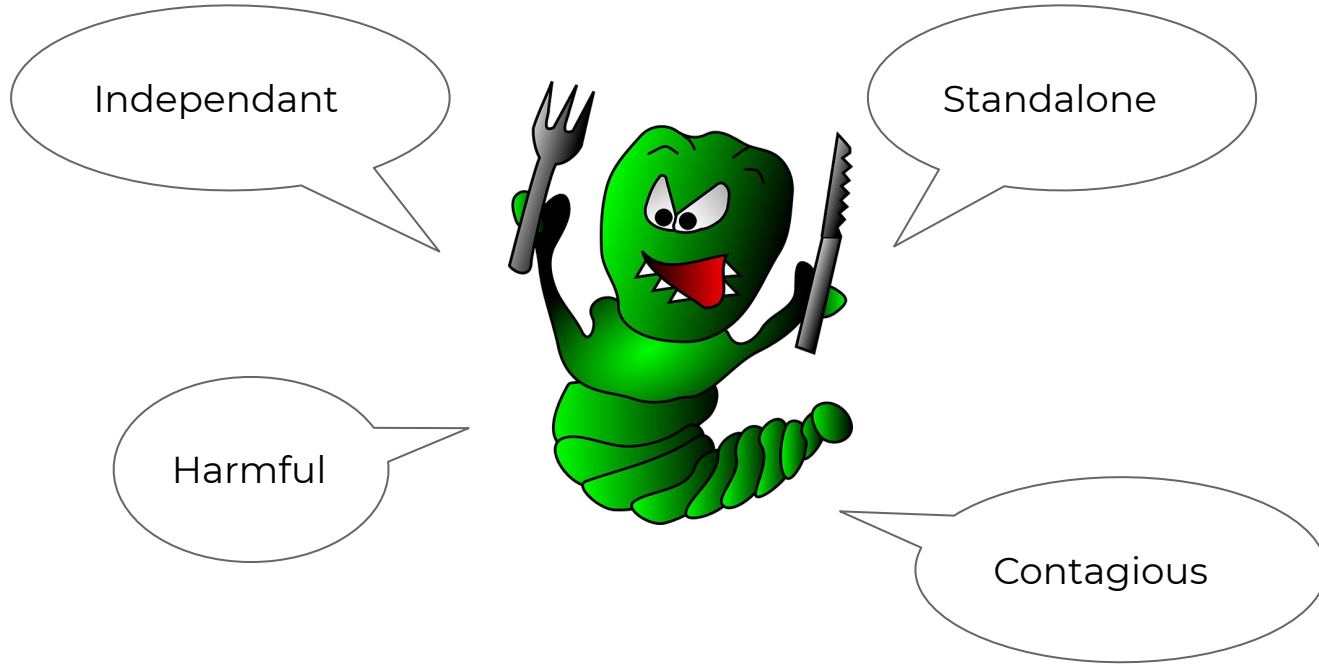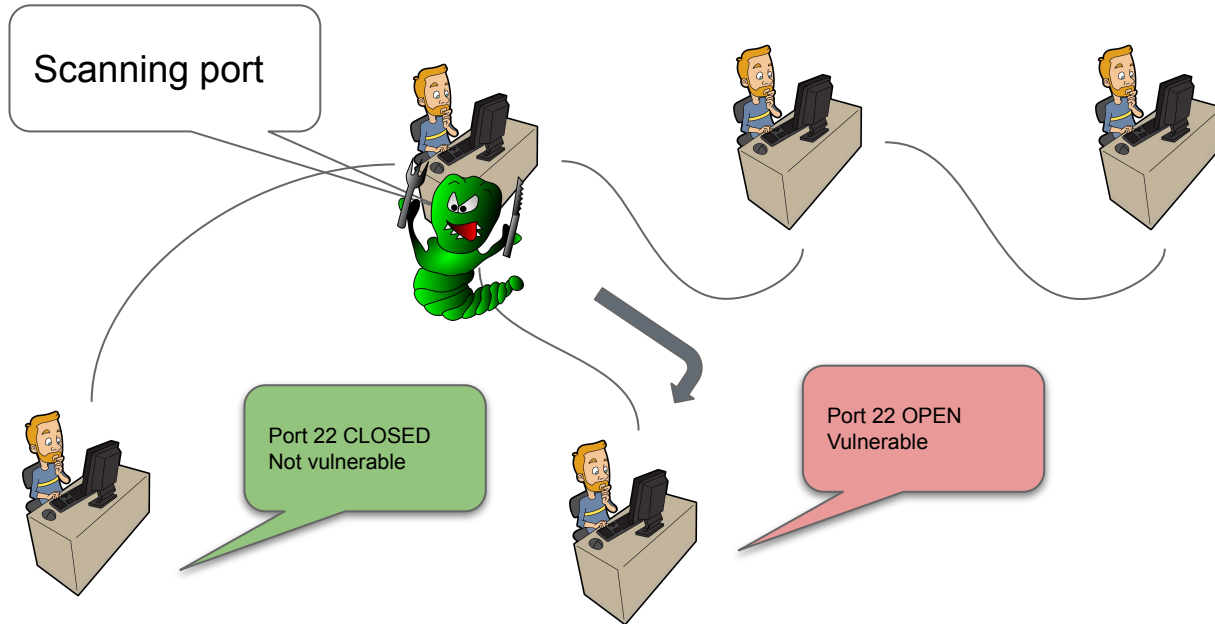# Predicting the propagation speed of network worms

Gabriel CAO

Network worms

Example : spreading of a worm

Study case: Red code

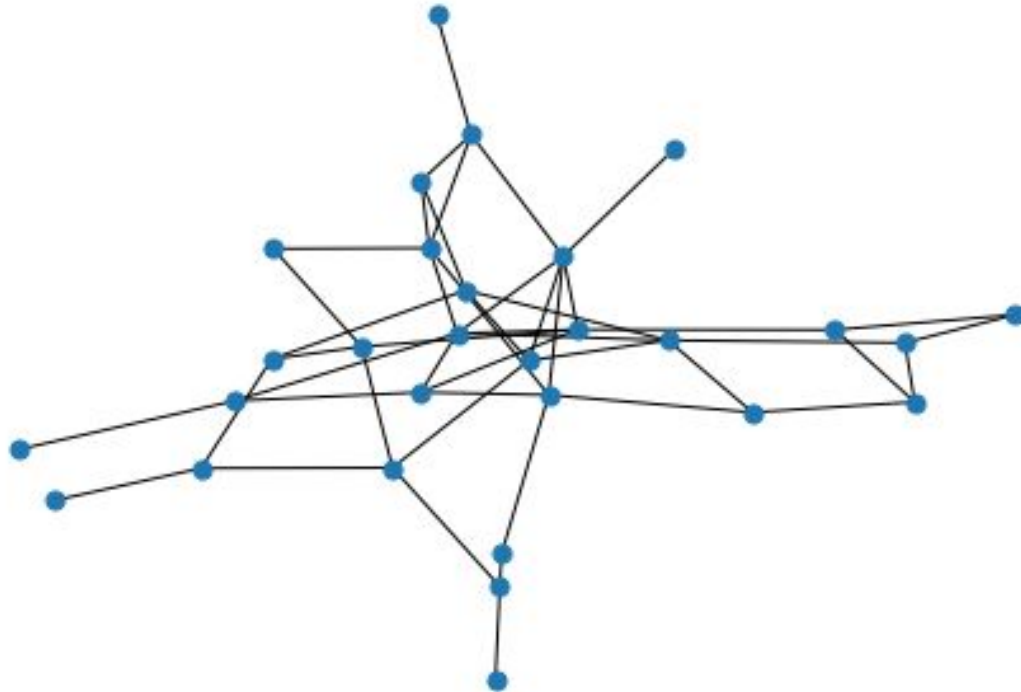**359,000 computers infected**

14 hours

2,000 more infected computers each minute

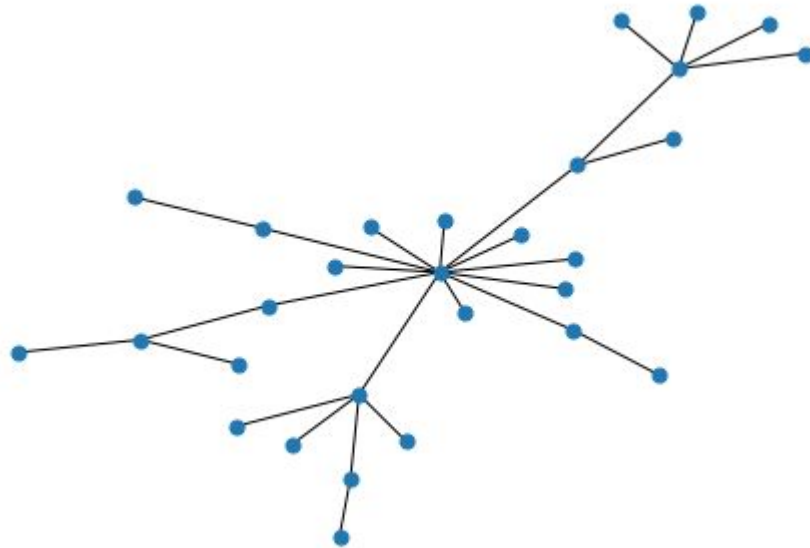**$2.6 billion**

Motivations

Predicting ?

Network model : Model Erdos-Renyi

Number of nodes and links

Random generation of links

Network model : Barabasi-Albert

Number of nodes

Scale-free

Power law distribution k^{α}
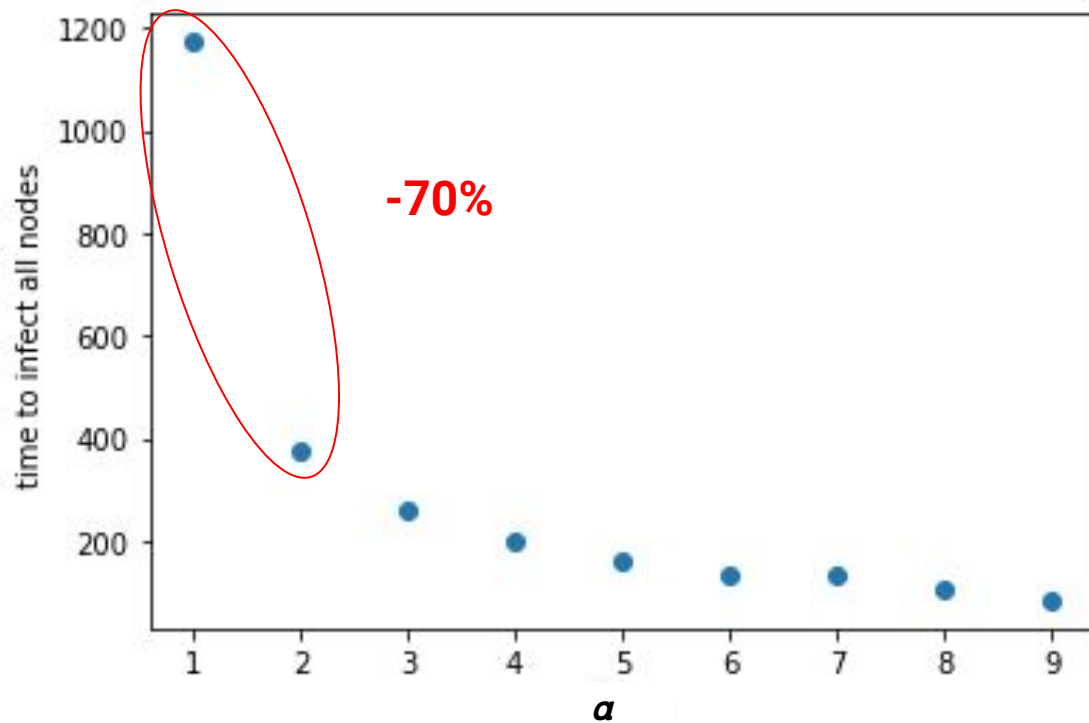
Spreading process model SI

Infected

Susceptible

Probability p

Results

Conclusion

Models

Implementations

Results