#### ransomware research project

Nikola Staykov Supervisor: Yavor Papazov

August 14, 2019

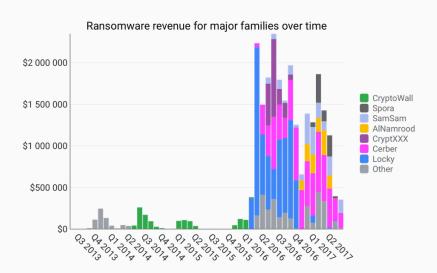
#### What is ransomware



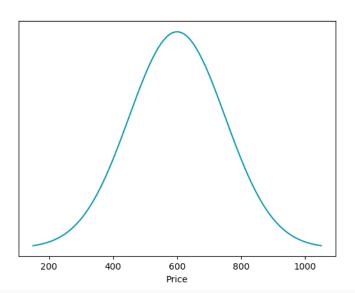
#### How it began



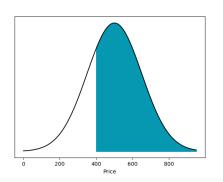
### Recent history



# Willingness to pay



# Why is it important?



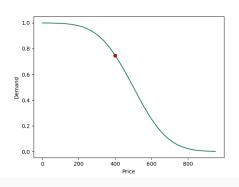


Figure: PDF

Figure: Price vs Demand

# **Approach**

1. Take 
$$A = \{a \mid a \sim \mathbb{P}\}, |A| = d$$

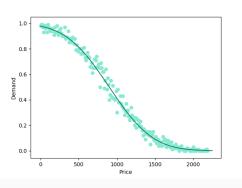
- 2. Fix a price x
- 3. Calculate

$$\frac{\Sigma_{a\in A}b_a}{d},$$

where

$$b_a = \begin{cases} 1 \text{ if } a > x, \\ 0 \text{ if } a < x \end{cases}.$$

#### Size matters



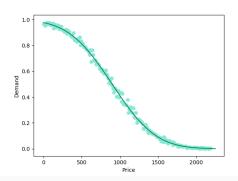
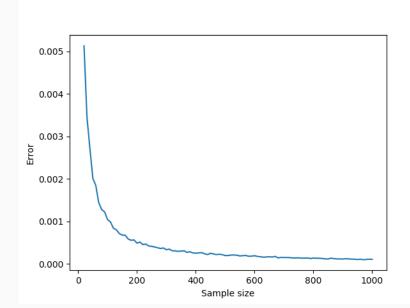


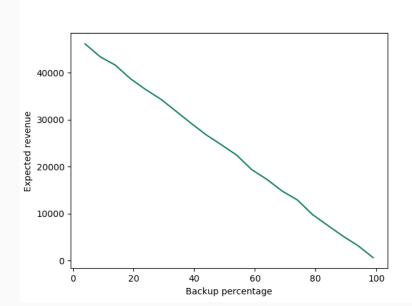
Figure: Size 100

Figure: Size 400

### Calculating error



# Backup



#### **Future Development**

- · Back the model with real data
- · Expand the model to different distribution options
- $\cdot$  Conduct experiments in order to gather data

### Acknowledgements

- · Yavor Papazov
- · Konstantin Delchev
- · Stanislav Harizanov
- · Victor Velev
- · HSSIMI