

# GhostPost



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Seamless Restoration of Censored Social Media Posts

# Problem and Threat Model

Fighting the producer side of internet censorship

Users post on a platform controlled by the censor

Censor's human employees examine (existing) posts, and delete some

# System Overview

Record fated-for-deletion posts before they're deleted

Harvesting done by users, for better coverage

Posts signed, so friends can trust friends' reports

Chrome extension

# Post Forging

Deleted posts are obtained by users telling us they used to be there

Anyone can claim anyone posted anything

Inherently no evidence!

Users sign posts; can verify friends' reports

### 冷笑话精选

希望达到的生活状态//@同道大叔:这个需要时间去沉淀，希望你我都能做到。

10月27日 23:35

删除不迟于: 10月28日 10:04

(Self-verified!)

### @思想聚焦

一个人最好的生活状态，是该看书时看书，该玩时尽情玩，看见优秀的人欣赏，看到落魄的人也不轻视，有自己的小生活和小情趣，不用去想改变世界，努力去活出自己。没人爱时专注自己，有人爱时，有能力拥抱彼此。

10月27日 23:14

删除不迟于: 10月28日 10:04

### 冷笑话精选

过生日，老爸亲手做了一个超酷的变形金刚蛋糕。天呐！！居然真的会变形，小朋友们要惊呆了！！O秒拍视频

10月27日 16:39

删除不迟于: 10月28日 10:04

(Self-verified!)

# Naive Evaluation Metric: Restored Posts

Fraction of deleted posts that get restored

What about a post from

a user with 1 follower?

a user with 100,000 followers?

Not all posts are worth the same!

## **Evaluation Metric: Post-views**

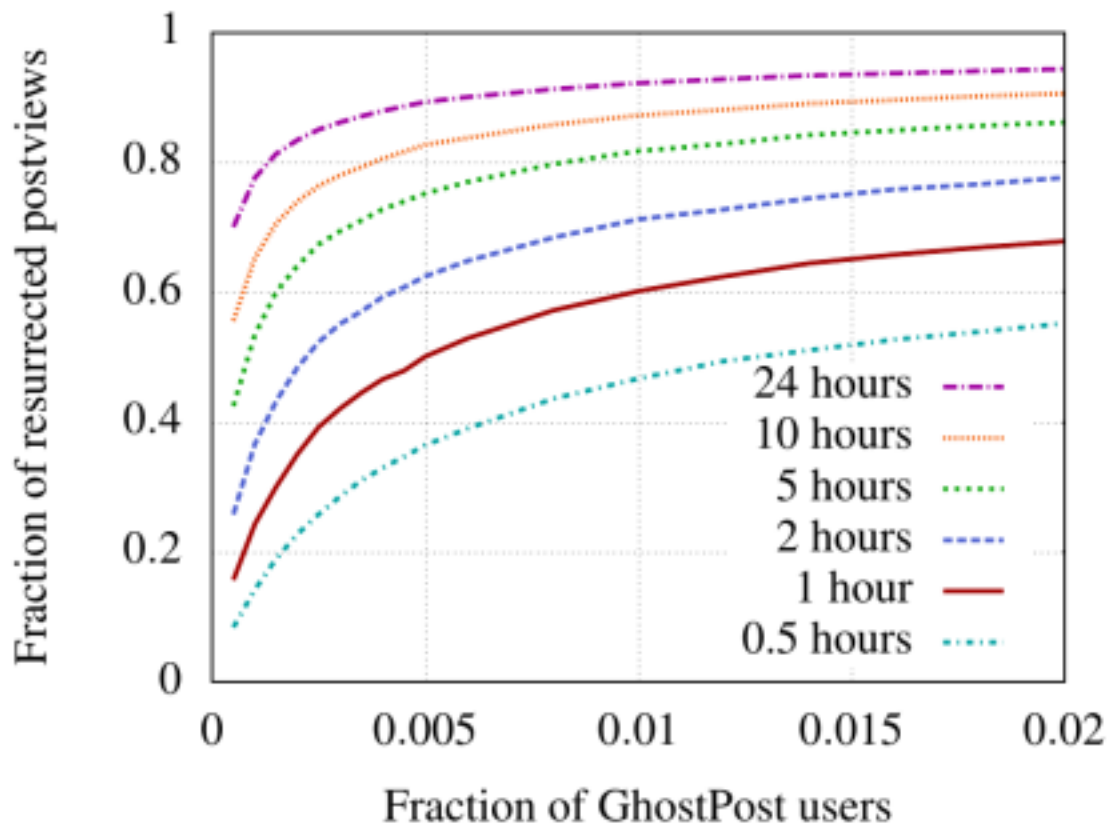
Post-views: number of users interested in a deleted post, summed over multiple posts

Number of posts recovered can be misleading

Resurrecting a post is pointless if nobody wanted to read it anyways

# Evaluation

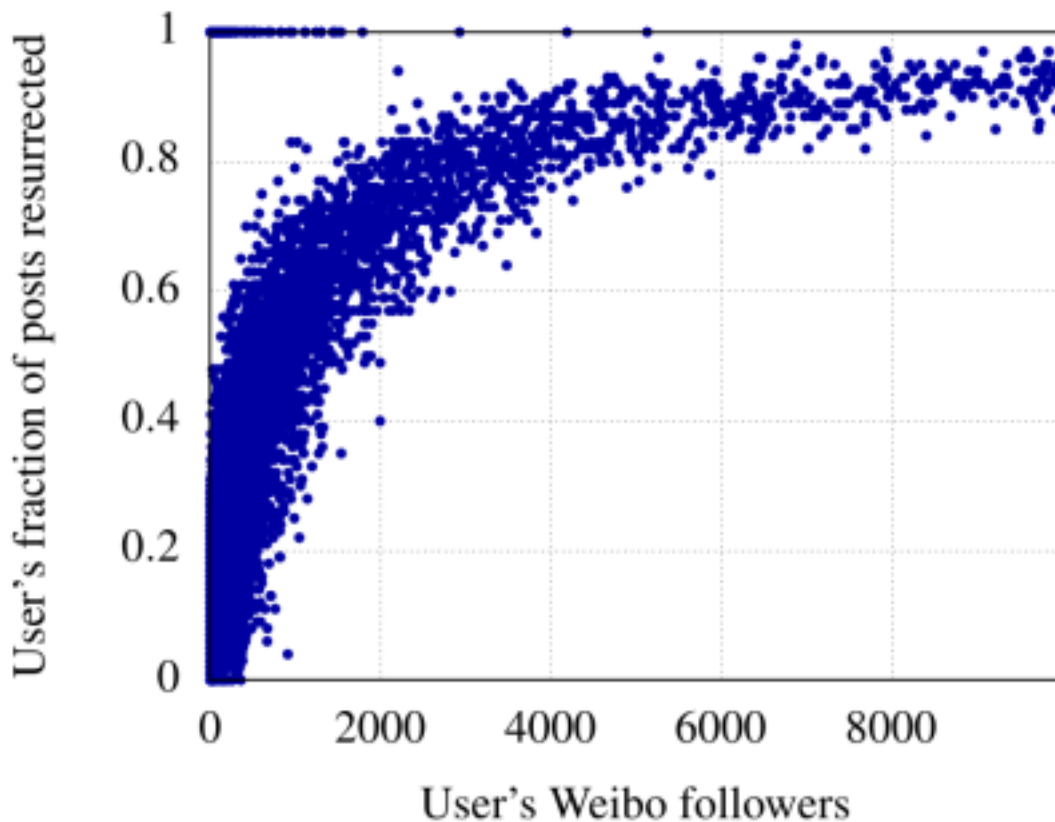
Capability of GhostPost networks of varying sizes to preserve deleted posts, against censors able to work at varying speeds





# Evaluation

How effectively GhostPost protects individual users' posts, when 1% of weibo users use GhostPost, and censor averages 10 hours to delete posts



**Spread the Word!**



<https://salmon.cs.illinois.edu/ghostpost.html>