

Protesters fled as police moved in aggressively with tear gas during a peaceful protest near the Fifth Precinct station in Minneapolis on Saturday night.

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that officers were responding to reports of shots fired and had been stopping vehicles, most with no license plates, but said later that there was no See **MINNESOTA** on A10 ►

Walz decries  
extremists  
role in riots

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Authorities trying to make  
sense of the wanton destruc-  
tion in Minneapolis on St.  
Paul for the past three days are  
struggling with a burning ques-  
tion: Who are these people?

Few answers emerged Sat-  
urday after Gov. Tim Walz and  
top law enforcement leaders  
suggested early in the day that  
as many as 80% of the looters  
and vandals who have decimated  
city streets in the name  
of George Floyd — an unarmed  
black man who died in police  
custody — actually came from  
out of town, maybe even out of  
the state. But they offered little  
evidence to back that up.

In some instances, such as  
the case of St. Paul Mayor Melvin  
Cartier, they had to correct

# Decentralized Fact Checking News Platform

Enpu You & Haeley Griffin

A protester is helped by others outside the Fifth Precinct in south Minneapolis.

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**Weight of unrest**  
Daytime emotions, night-  
time chaos take toll

The cry of a hellish  
'Fire, fire, fire'

and MIGUEL OTÁROLA  
Star Tribune staff writers

The residents of one south  
Minneapolis apartment build-  
ing started desperately warn-  
ing one another with shouts  
and pounding a little before  
4 a.m. Saturday as the city  
suffered through perhaps the  
worst night in its history.

"Our neighbors were  
banging on all the doors and  
screaming, 'Fire, fire, fire,'" said  
Catharyne Bryant, who  
lives with Brandon Byers in  
the building near the intersec-  
tion of Nicollet Avenue S. and  
W. 35th Street.

and get out," she added.

Immediately next door,  
separated by only a few feet,  
a building containing O'Reilly  
Auto Parts and a Family Dol-  
lar store was on fire — one  
of hundreds that burned as a  
third night of riots and unrest  
spread to more neighborhoods  
in Minnesota's largest city.

Lizz Brazen was awake and  
following the news when she  
realized the Fond du Lac build-  
ing was in imminent danger.  
She jumped right to notifying  
neighbors instead of bothering  
to call 911, then helped orga-  
nize teams of residents to wet

See **CITIES** on A9 ►

Photo illustration: Sarah Grillo/Axios.  
Photo: Star Tribune via Getty Images

Leaders speak to the pain, beg for peace

# Project Overview

- A news platform that integrates third party fact checking as well as crowdsourced evaluations.
- Distributed contents: each block contains articles with evaluations from third parties (Google Fact Checking API) and users.
- Each evaluation counted as mining & transaction: users incentivized to participate in discussion.
- Finding consensus among peers: variance, standard dev, and average.



Illustration: Sarah Grillo/Axios

# Motivation

- Social media has become many people's main source of news and information.
- Content moderation is one of the most challenging tasks on current social platforms.
- The underlying trust issue: the rise of misinformation and disinformation erodes public trust in the most fundamental institutions.



Illustration: Rebecca Zisser/Axios

# Demo

```
enpuyou Enpus-MacBook-Pro at ~/cmpsc/390s20/project-agua-fresca on main x
> pipenv run python src/blockchain.py
ecc3e0e80e48af9c78cec2a446399b2a98ecda6dbf7ef6446cfbf3730feff804
├── 4c4b77fe3fc6cfb92e4d3c90b5ade42f059a1f112a49827f07edbb7bd4540e7b
│   ├── e8bcd97e349693dcfec054fe219ab357b75d3c1cd9f8be1767f6090f9c86f9fd
│   │   ├── 2215e8ac4e2b871c2a48189e79738c956c081e23ac2f2415bf77da199dfd920c
│   │   └── fa61e3dec3439589f4784c893bf321d0084f04c572c7af2b68e3f3360a35b486
│   └── 9c769ac26f8d61ff40859e5201537845555136f0fd7ab604f7033180f76af9
│       ├── 906c5d2485cae722073a430f4d04fe1767507592cef226629aeadb85a2ec909d
│       └── 11e1f558223f4c71b6be1cecfcd1f0de87146d2594877c27b29ec519f9040213c
2b15ae188149206a75850e6df845ea642d44912413c660181856a0929afc8838
├── 2b15ae188149206a75850e6df845ea642d44912413c660181856a0929afc8838
├── 53304f5e3fd4bcd20b39abdef2fe118031cc5ae8217bcea008dea7e27869348a
└── 3bf9c81c231cae70b678d3f3038f9f4f6d6b9d7adc9b378f25919ae53d17686
{'hash': '00d0ff3cdb8f71cfacd1f7d6a51ad72393eee548587bc92337d27c92a667daef',
 'index': 1,
 'news': {'mean': 3.5,
          'review': ['False',
                     'Pants on Fire',
                     'False',
                     'False',
                     'False',
                     'No Evidence',
                     'Distorts the Facts',
                     'Distorts the Facts',
                     'Conspiracy theory',
                     'Mixture'],
          'stddev': 1.8708286933869707,
          'value': 'coronavirus is a hoax'},
 'nonce': 53,
 'previous_hash': '00b4e25096f94b227c0955cb2f331f08b55bd05c7694e089782e1ec6e8727f30',
 'timestamp': '2021-02-08 07:01:01.298233',
 'transactions': 'ecc3e0e80e48af9c78cec2a446399b2a98ecda6dbf7ef6446cfbf3730feff804'
}
```

User evaluation  Third party compares to Avg. user evaluation	High Variance (Spread out evaluation)	Low Variance (Centered evaluation)
	Agrees	Disagrees
Agrees	Consensus between overall user and third parties; dispute among users	Consensus
Disagrees	No consensus	Consensus within user groups yet not with third parties

Ideal Scenario

# “Bigger Picture”

- Real-world scenario:

## Twitter birdwatch

*“a community-driven approach to address misleading information”*

- Fully functioning social media platform:  
***informed*** but ***not moderated***
- Incorporate centralized solution:  
fact checking ML model for efficiency
- Extend the discussion on opinion v. truth

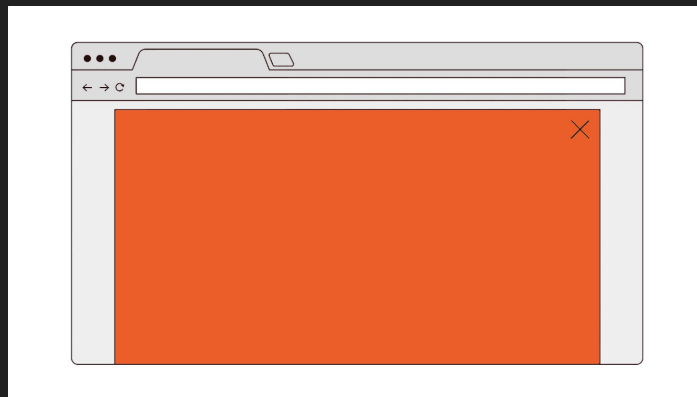


Illustration: Caresse Haaser, Rebecca Zisser/Axios