



# PRIVACY IN THE AGE OF ANALYTICA

ANDREW LOMBARDI  
@KINABALU



# ABOUT ME

2 - [🐦](#) @KINABALU

# ABOUT ME

- > 20 YEARS IN BUSINESS
  - > 11X @ JAVA2DAYS
  - > PUBLISHED AUTHOR
- > SOFTWARE CONSULTANTS & SPEAKERS
  - > INVENTED THE INTERNET

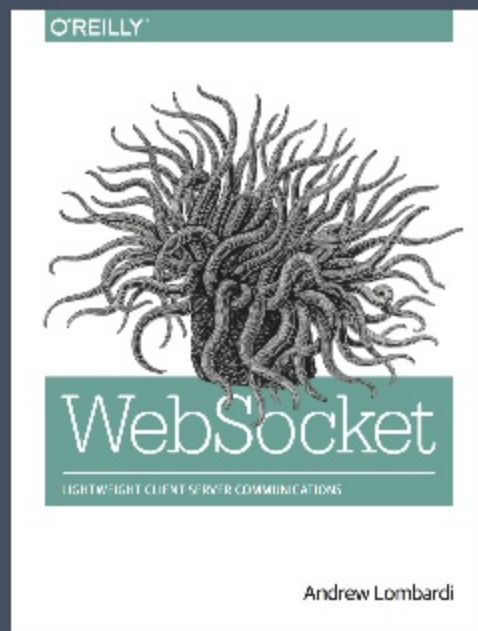
TO OUR SUCCESS!

# BEGINNING SPRING 5



[HTTPS://BIT.LY/BEGINNINGSPRING5](https://bit.ly/beginningspring5)

# WEBSOCKET



[HTTPS://BIT.LY/WEBSOCKETBOOK](https://bit.ly/websocketbook)

63

бургас

Лана ракия

произведена по класическа  
селекционирано грозде

A stylized bird logo, possibly a Garuda, is centered in the background. It features a yellow body, dark blue wings and tail, and a grey head with a yellow beak. The bird is set against a large yellow circle with a dark blue border, all on a grey background.

**THEY ARE  
WATCHING YOU**



# WHY DO I CARE?

- > LIMIT ON POWER
- > REPUTATION MANAGEMENT
  - > SECURITY
  - > TRUST
- > FREEDOM OF THOUGHT AND SPEECH



**BUT I  
HAVE NOTHING  
TO HIDE!**

**‘ARGUING THAT YOU DON’T CARE  
ABOUT THE RIGHT TO PRIVACY  
BECAUSE YOU HAVE NOTHING TO HIDE  
IS NO DIFFERENT THAN SAYING YOU  
DON’T CARE ABOUT FREE SPEECH  
BECAUSE YOU HAVE NOTHING TO SAY.’**

**– EDWARD SNOWDEN**

# IDENTITY THEFT

16.7 MILLION  
VICTIMS IN  
2017

**\$17 BILLION  
IN LOSSES**

40% OF CONSUMERS  
TARGETS

**1.3 MILLION  
CHILDREN  
IDENTITIES STOLEN**

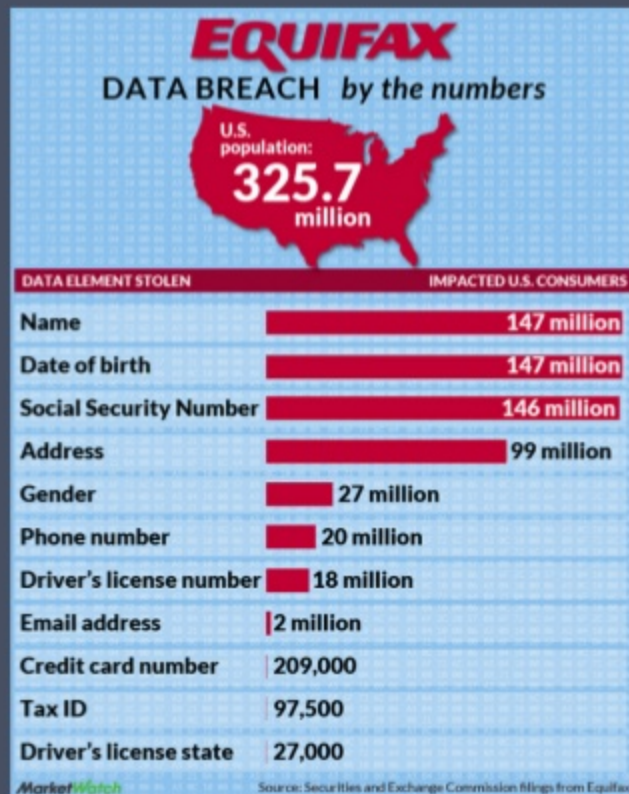


# !!--HAVE I BEEN PWNED?

[HTTPS://HAVEIBEENPWNED.COM/](https://haveibeenpwned.com/)

- > WEBSITES: 417
- > ACCOUNTS: 9,139,071,108

# APACHE STRUTS CVE-2017-9805



# CAR STICKERS



# SOCIAL MEDIA

# TOP 10 IOS APPS

- > YOUTUBE
- > INSTAGRAM
- > SNAPCHAT
- > TIKTOK
- > MESSENGER
- > GMAIL
- > NETFLIX
- > FACEBOOK
- > GOOGLE MAPS
- > AMAZON

# TOP 10 WEBSITES

- > GOOGLE.COM
- > YOUTUBE.COM
- > TMALL.COM
- > FACEBOOK.COM
- > BAIDU.COM
- > QQ.COM
- > SOHU.COM
- > TAobao.COM
- > LOGIN.TMALL.COM
- > WIKIPEDIA.ORG

# facebook





# FACEBOOK OWNS

- > INSTAGRAM
- > WHATSAPP

Google

2018  
AD REVENUE  
55 BILLION USD

# GOOGLE

- RUNS TOP 3 APPS ON IOS
- RUNS TOP 2 WEBSITES WORLDWIDE
  - ANDROID
  - CHROMEBOOK
    - NEST
    - FITBIT

2018  
AD REVENUE  
116.3 BILLION USD





2018  
AD REVENUE  
2.617 BILLION USD



# 2018 REVENUE

51 BILLION USD

2.1 BILLION USD AD REVENUE

IF IT'S  
FREE

**YOU  
ARE  
THE PRODUCT**

PURP PURP

PURUIT

# SMART SPEAKERS





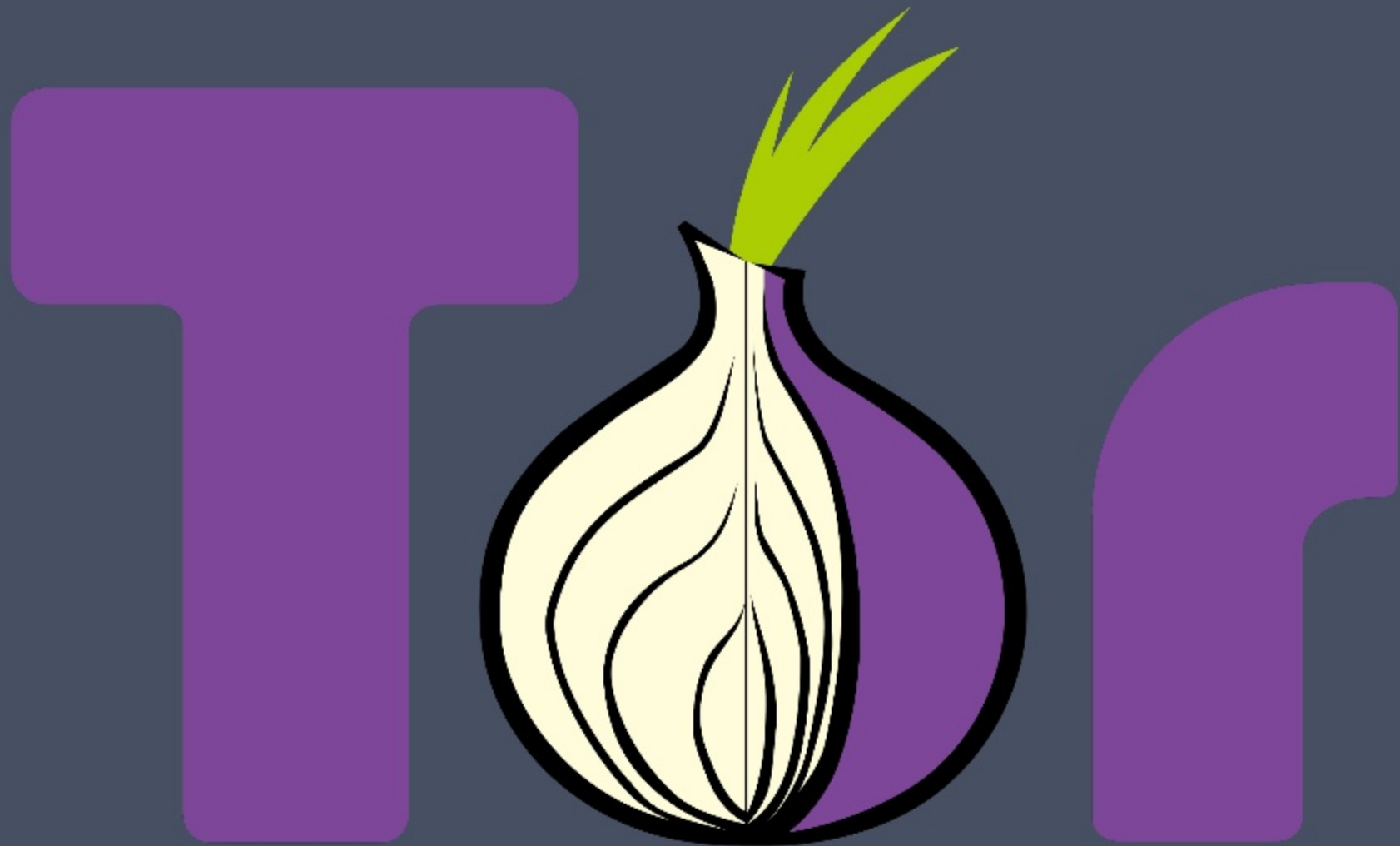


**IT IS WIDELY KNOWN NOW THAT THE FBI IN THE '50S AND '60S  
COMPILED FILES ON PROMINENT CIVIL RIGHTS ACTIVISTS, ON  
PRESIDENTS AND OTHER PEOPLE OF IMPORTANCE.**

**QUESTION: WHAT VALUE DID THAT HAVE IN SWAYING THE  
THOUGHTS OF LEADERS?**

**'IF YOU GIVE ME SIX LINES WRITTEN BY  
THE HAND OF THE MOST HONEST OF  
MEN, I WILL FIND SOMETHING IN THEM  
WHICH WILL HANG HIM.'**

**- MARCUS FABIVS QVINTILIANVS**







# WHAT IS TOR GOOD FOR?

- > ANONYMITY
  - > LIVING IN DICTATORSHIP
- > JOURNALIST IN OPPRESSIVE COUNTRY
  - > WHISTLEBLOWER (SNOWDEN)
  - > HACKER
- > ILLEGAL ACTIVITY











# USE A VPN

# CHOOSE A BETTER BROWSER

- > BRAVE
- > TOR
- > FIREFOX QUANTUM
- > SAFARI

NOT CHROME

# INSTALL AD BLOCKERS

- > KA-BLOCK
- > DISCONNECT
- > UBLOCK



**TURN OFF  
LOCATION  
SERVICES**

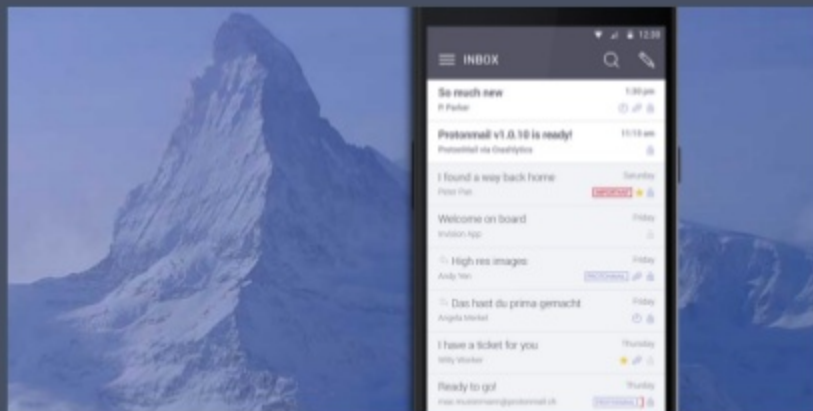




# SECURE EMAIL



# ProtonMail





# PASSWORD MANAGERS

NOT JUST FOR PASSWORDS


# POPULAR PASSWORD MANAGERS

KEEPASSXC  OPEN SOURCE




LastPass...

1Password

Cancel Save




java2days.com

 >  Primary 

username

RakiaKing


password

..... 



website


https://example.com

SECURITY QUESTIONS





What is your favorite drink?


 



rakia



Which one of the jonas brother's is your favorite?


 



none of them

What is the name of your least favorite relative?



Bellatrix

# TWO-FACTOR AUTHENTICATION (2FA)

- SMS PASSCODES
- PHONE CALLBACKS
- SECURITY TOKENS (GOOGLE AUTHENTICATOR, DUO, AUTHY)
  - PUSH NOTIFICATIONS
  - TOTP
  - U2F DEVICES

# TWO-FACTOR AUTHENTICATION (2FA)

- > GOOGLE AUTHENTICATOR
  - > DUO
  - > AUTHY

# DON'T KEEP ALL YOUR VALUABLES IN ONE PLACE





Firefox Monitor

a [REDACTED]@ [REDACTED].com  
appeared in a new data breach

Firefox Monitor warns you about data breaches involving your personal info. We just received details about another company's data breach.



**Data Enrichment Exposure From  
PDL Customer**

Breach added:

**November 22, 2019**

Compromised data:

**Phone numbers, Email addresses**

[More about this breach](#)

Learn more about [Firefox Monitor](#)  
Breach data provided by [Have I Been Pwned](#)

[See All Breaches](#)

DON'T GOOGLE. DUCKLE?



DuckDuckGo.



# SUPPORTIVE LAWS

- > GDPR
- > CALIFORNIA PRIVACY ACT (CCPA)
- > MORE...?

**"PRIVACY IS RARELY LOST IN ONE FELL SWOOP. IT IS USUALLY ERODED OVER TIME, LITTLE BITS DISSOLVING ALMOST IMPERCEPTIBLY UNTIL WE FINALLY BEGIN TO NOTICE HOW MUCH IS GONE."**

**- - DANIEL J. SOLOVE**

# MORE READING ON PRIVACY

SURVEILLANCE SELF-DEFENSE BY EFF

THE US GOVERNMENT HAS BETRAYED THE INTERNET. WE NEED TO  
TAKE IT BACK

# КРАЙ НА РАЗГОВОРА

Q & A

# ANDREW LOMBARDI / @KINABALU

# MYSTIC CODERS, LLC

MYSTICCODERS.COM

BIT.LY/BEGINNINGSPRING5

BIT.LY/WEBSOCKETBOOK