

UNCHAIN (MY HEART)

“You were not made to live as brutes,
but to follow virtue and knowledge”

Dante, Inferno XXVI, Ulysses

DINO
ESPOSITO



DOTNEXT

2017

Dino Esposito

I Have
Microservices
and I Didn't Know

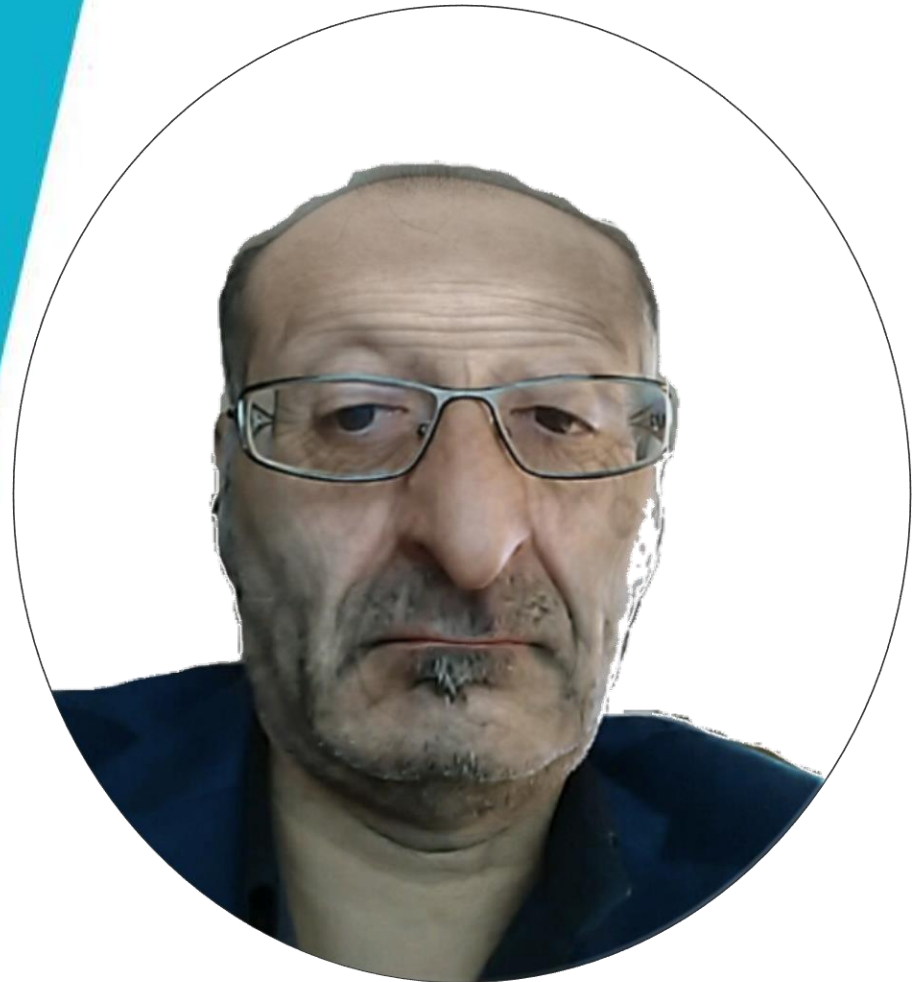


DOTNEXT

2048

Dino Esposito

I Once Had
Microservices
but I can't remember



WHAT'S NEW IN 2048 ?

WHAT WAS **HOT** IN 2017

- ☐ **Artificial Intelligence**
- ☐ **Machine Learning**
- ☐ **IoT**
- ☐ **BigData**

WHAT WAS



IN 2017

- ☐ **Debugging**
- ☐ **Profiling**
- ☐ **Optimization**
- ☐ **Throttling**

Bus

DevOps

Memory

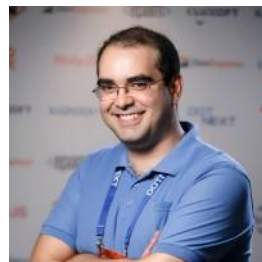
Scalability

Docker

Reactive

DEBUGGING and PROFILING APPLICATIONS

used to be a cool thing



DOTNEXT 2017

Debugging and Profiling
.NET Core Apps on Linux

SERVERLESS COMPUTING **used to be a cool thing**



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Serverless computing
with .NET based Azure Functions

DEVELOPERLESS COMPUTING is now common



DOTNEXT 2048

Developer-less computing
with .NET based Azure **Robots**

HOW DID IT HAPPEN ?

HOW DID IT HAPPEN ?



2008

Satoshi Nakamoto creates Bitcoin

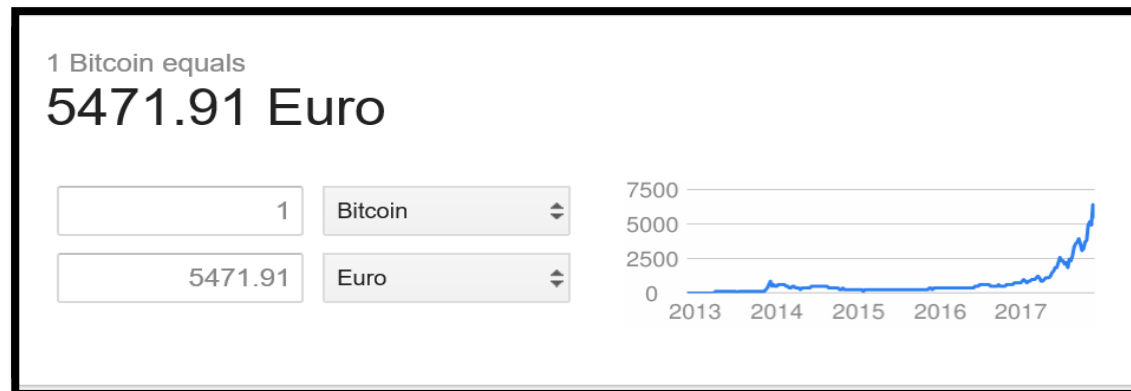
- ❑ Digital asset using cryptography to secure transactions and create new units
- ❑ Decentralized currency, as opposed to centralized currencies controlled by corporate boards

2009

First block inserted in the public ledger

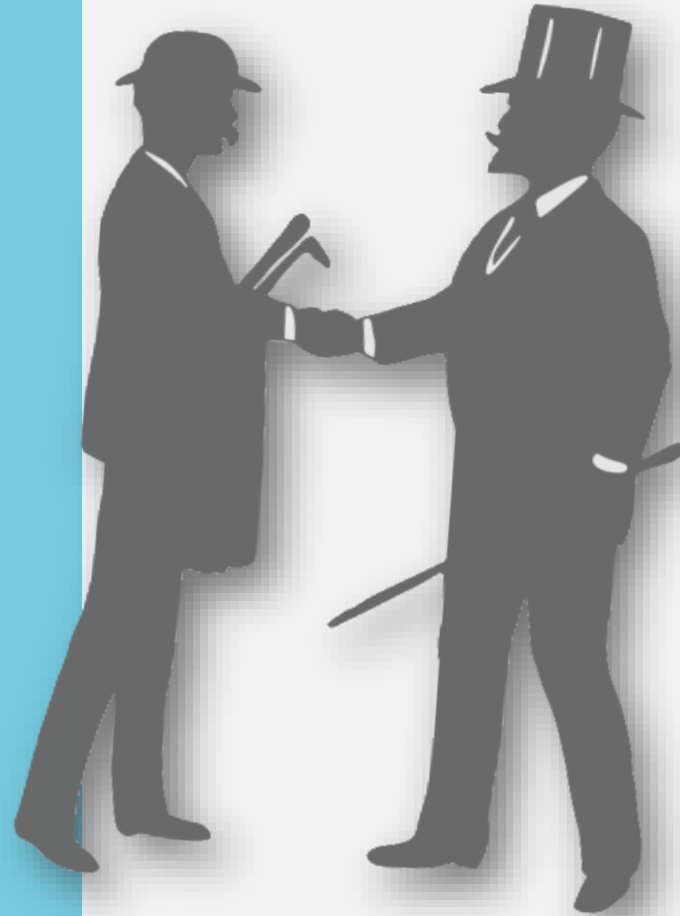
- ❑ The genesis block has a timestamp of **18:15:05 GMT on 3 January 2009**
- ❑ Doesn't reference other blocks; added with ad hoc code

2017



Bitcoin

IN ACTION

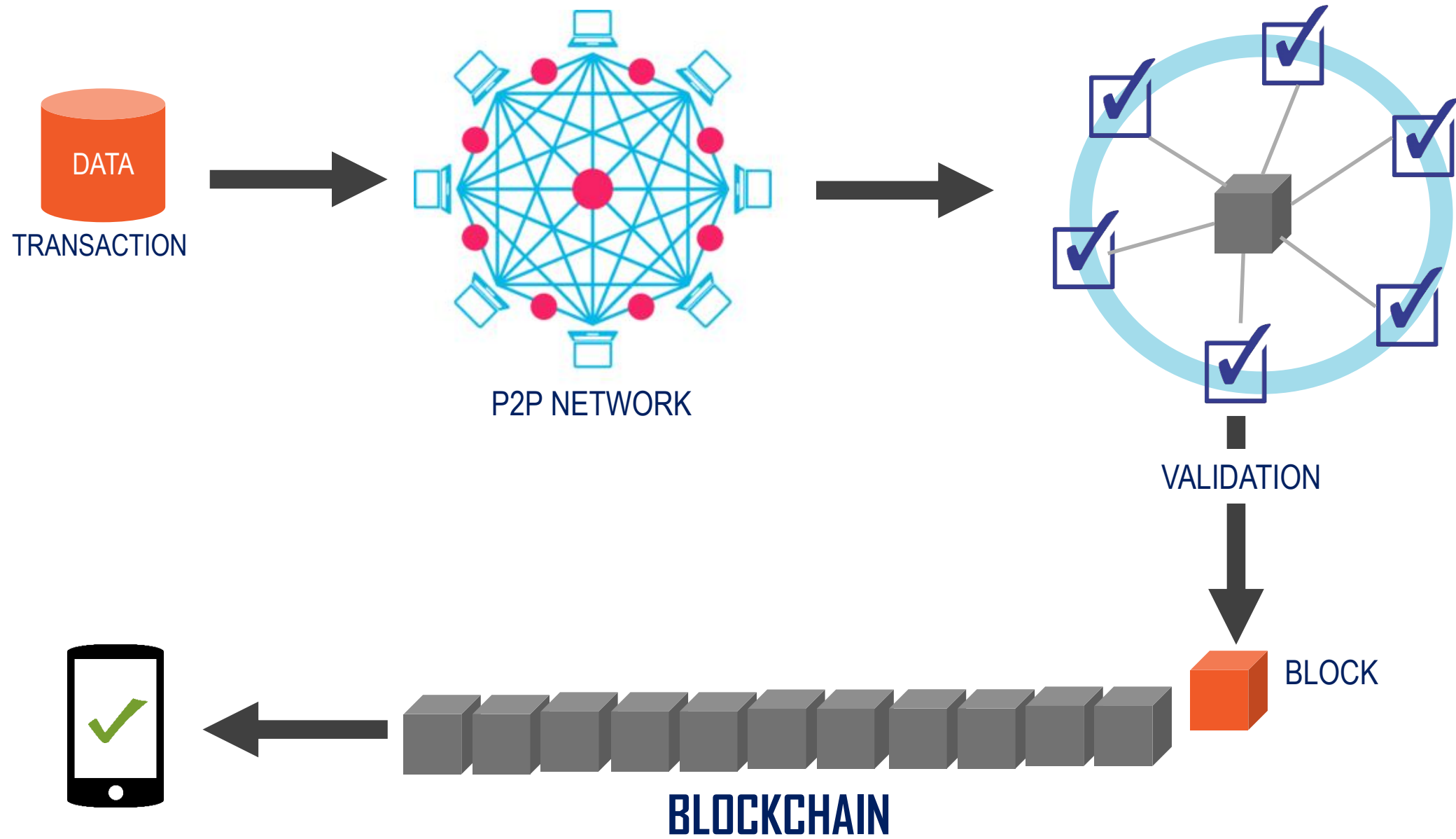


BITCOIN

CryptoCurrencies

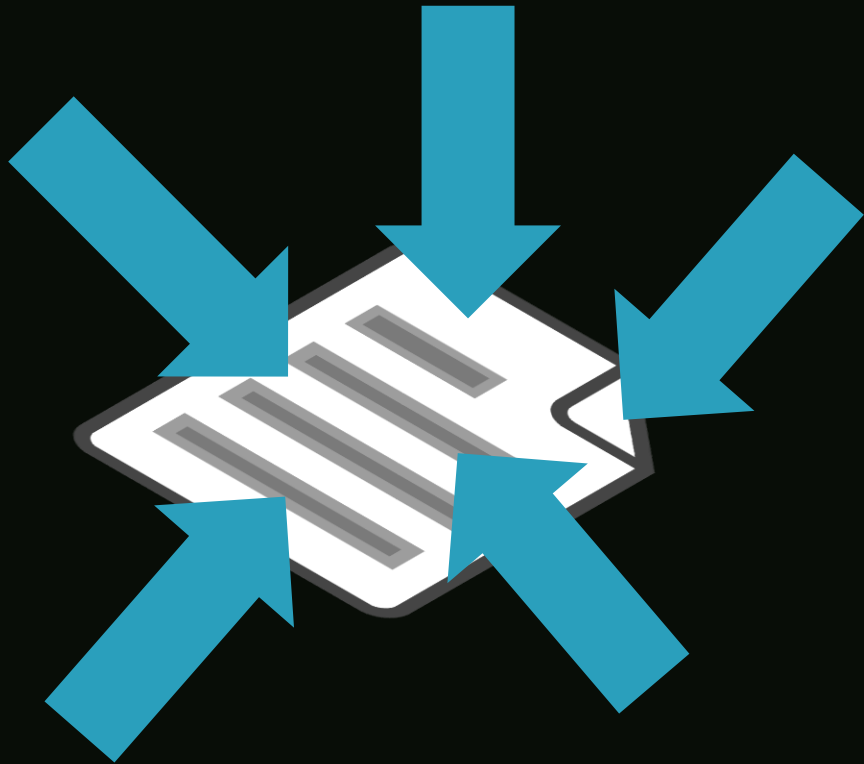
Virtually
everything else

BLOCKCHAIN



BLOCKCHAIN

~ Google Docs



- ☐ Unlike today's databases
- ☐ No sharing
- ☐ Duplicated thousands of times
- ☐ Across a network of computers
- ☐ Constantly updated
- ☐ Public and easily verifiable

“The blockchain is an incorruptible digital ledger of economic transactions that can be programmed to record not just financial transactions but virtually everything of value.”

Don Tapscott, Co-founder, Blockchain Research Institute

<http://www.BlockchainResearchInstitute.org>

RELATED CONCEPTS

2017

- ☐ **Event Sourcing**
- ☐ **Single point of truth**
- ☐ **Audit log**
- ☐ **BigData**

2048

- ☐ **Just the same**
- ☐ **Just universal**
- ☐ **Just public**
- ☐ **Just true**

The image features a large, vibrant, multi-colored, wavy, starburst-like pattern centered on a solid blue background. The pattern consists of numerous concentric, wavy lines in a variety of colors including yellow, orange, red, purple, blue, green, and grey, creating a sense of depth and movement. Overlaid on this pattern is the word "IMAGINE" in a bold, dark blue, sans-serif font.

IMAGINE

TRANSACTION

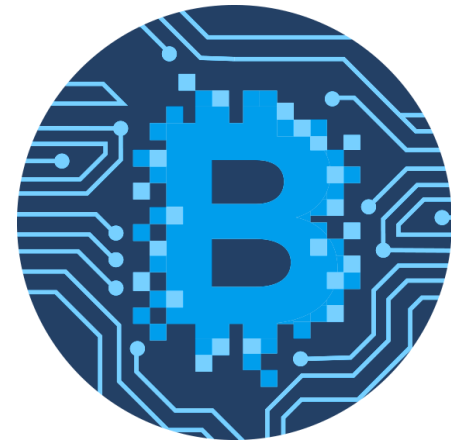
An exchange, or transfer, of goods, services, or funds.

A communicative action, or activity, involving two parties, or things, that reciprocally affect, or influence, each other.

An exchange, or transfer, of goods, services, or funds.

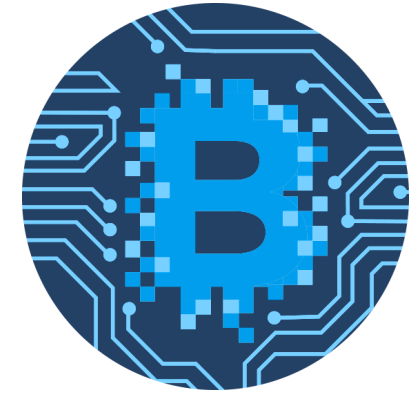


A communicative action, or activity, involving two parties, or things, that reciprocally affect, or influence, each other.





INTERNET



BLOCKCHAIN

Digital storage and photography
E-commerce and booking
Speech recognition
Mobile computing
Geo-spatiality
Social media and instant messaging
Internet of Things
BigData



BiggerData
Social transactions
Digital ubiquity
Universal identity
Polyglot communication
Algorithmic work
Body transactions
Life monitoring



Knowledge



Life



Every business transaction is logged

Every buck you make

Every buck you pay

Every good you buy

Every good you trash

Every social transaction is logged

Every place you go

Every face you meet

Every word you say

Every char you type

Every body transaction is logged

Every time you're sick

Every beer you drink

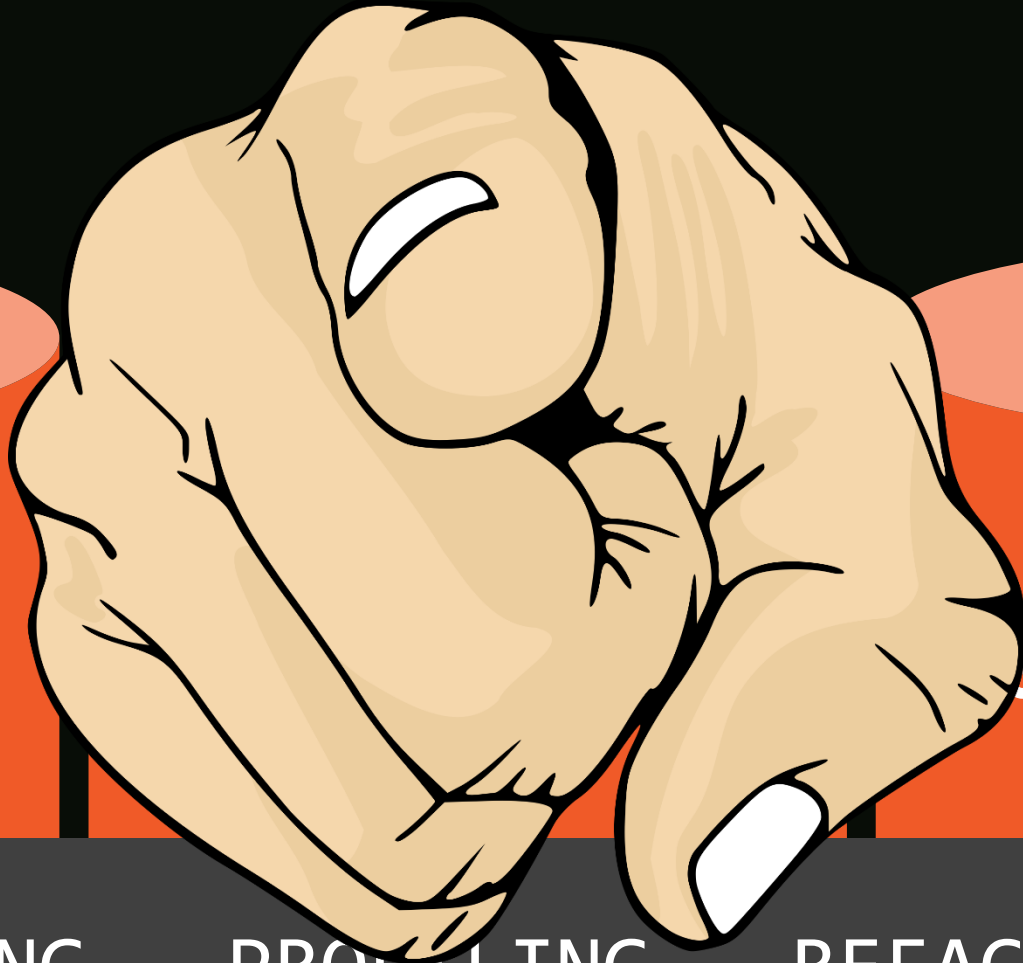
Every bite you eat

Every step you take

Every move you
make

THE POLICE

MONITORING

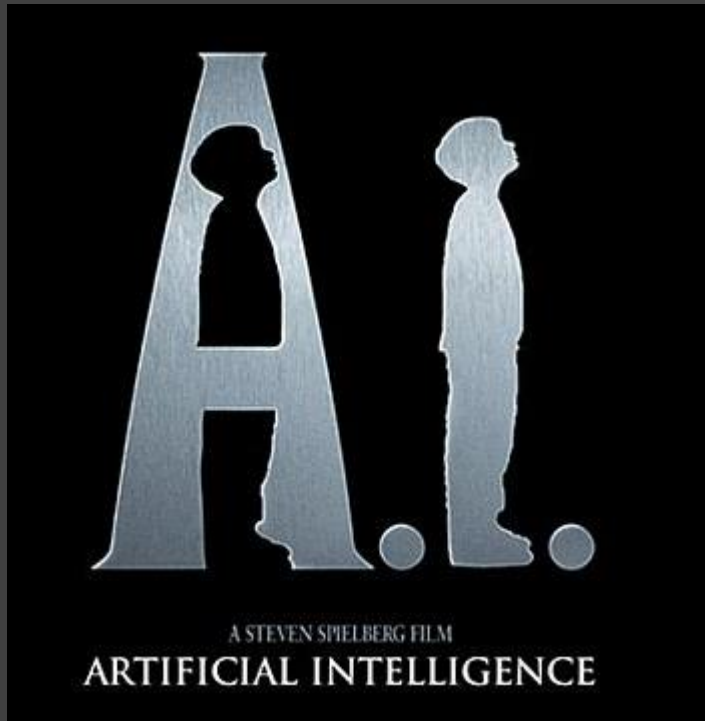


HEALTH

BEHAVIORAL

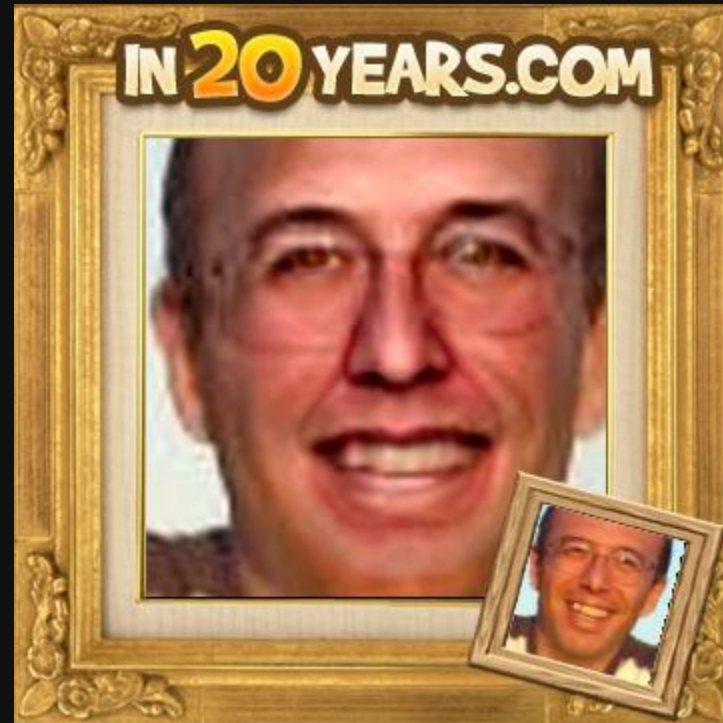
DEBUGGING – PROFILING – REFACTORING

Your life as a database is fun...



- ❖ Will run a **SQL query** on you to determine what's wrong with your health
- ❖ Will run **nunit** on you before hiring
- ❖ Will run **dotTrace** on you if your performance is poor

IN 2048 IF PERFORMANCE IS POOR,
ONE OF THOSE GUYS CAN
FIX IT ...



NOT HAPPY?



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Self-aware Lives:
Automatic **Happiness** Monitoring

STILL NOT HAPPY?

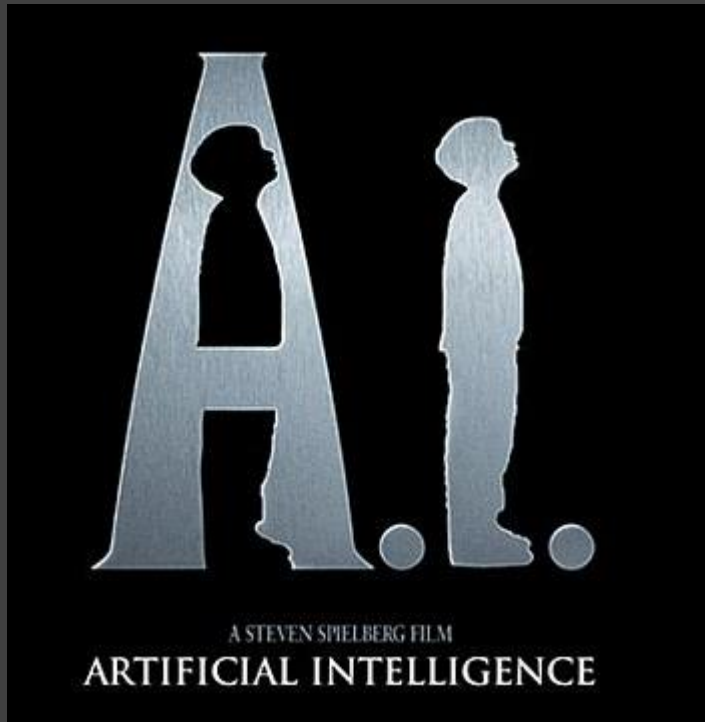


DOTNEXT 2048

From **happiness** injection to
happiness rejection

IS STILL LIFE ?

Computers would take over most boring tasks of life



- ❖ Driving cars for you
 - ❖ Booking flights for you
 - ❖ Buying things for you
 - ❖ Paying bills for you
 - ❖ Fixing toilets for you
 - ❖ Bringing trash out for you
 - ❖ Receiving spam for you
-
- ❖ Having sex for you???
 - ❖ Writing Angular applications for you???

IS STILL LIFE ?

BLOCKCHAIN

NO WAIT

NO SECRETS

NO JEALOUSY

NO CRIME

NO PRIVACY

**IN 2048 ONLY DREAMS
WILL BE PRIVATE.**

MAYBE



DEBUGGING and PROFILING EROTIC DREAMS in Linux

Sasha Goldshtein

“Computers will overtake humans with AI within the next 100 years. When that happens, we need to make sure the computers have goals aligned with ours.”

Stephen Hawking (2015)

Director of Research at the Centre for Theoretical
Cosmology within the **University of Cambridge**



“We are the Borg. Lower your shields and surrender your ships. We will add your biological and technological distinctiveness to our own. Your culture will adapt to service us. Resistance is futile.”

The Borg

(Cybernetic organisms in Star Trek)

RESISTANCE IS FUTILE.

FUTURE IS APPROACHING.

2017

Data counts more than algorithms

Machine learning relies on **brute-force** algorithms

Machine learning builds atop **obsolete** statistics theory

Bayesian theory vs. Quantum statistics

BigData can get faster to better results than algorithms

This is how Alan Turing cracked the ENIGMA

Quantum computing will mark the comeback of algorithms

Problems will still be NP-complete but become treatable

2048

Algorithms count more than data

And to some extent, more than technology

RESISTANCE IS FUTILE.

YOU WILL BE GARBAGE-COLLECTED.

SEE YOU AT

DOTNEXT

2048

 despos

 desposofficial

 desposofficial

