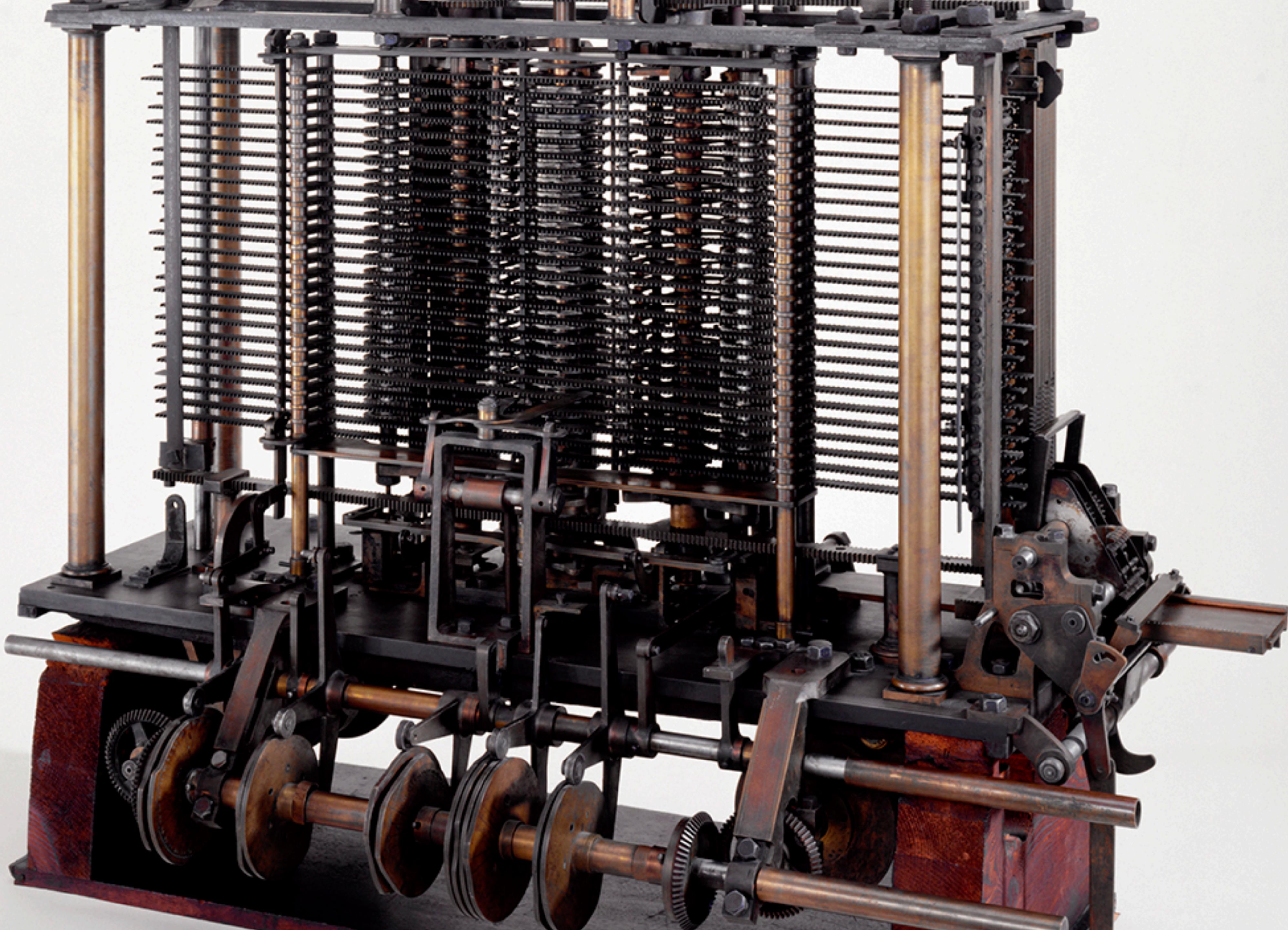


Programmieren damals und heute

100 Jahres-Feier VHS Köln
Dr. Peter Jung | 23.05.2019



Programmieren ist Mathematik.



Ada Lovelace
erste Programmiererin

Industrielle Revolution

Körperliche Arbeit durch Maschinen

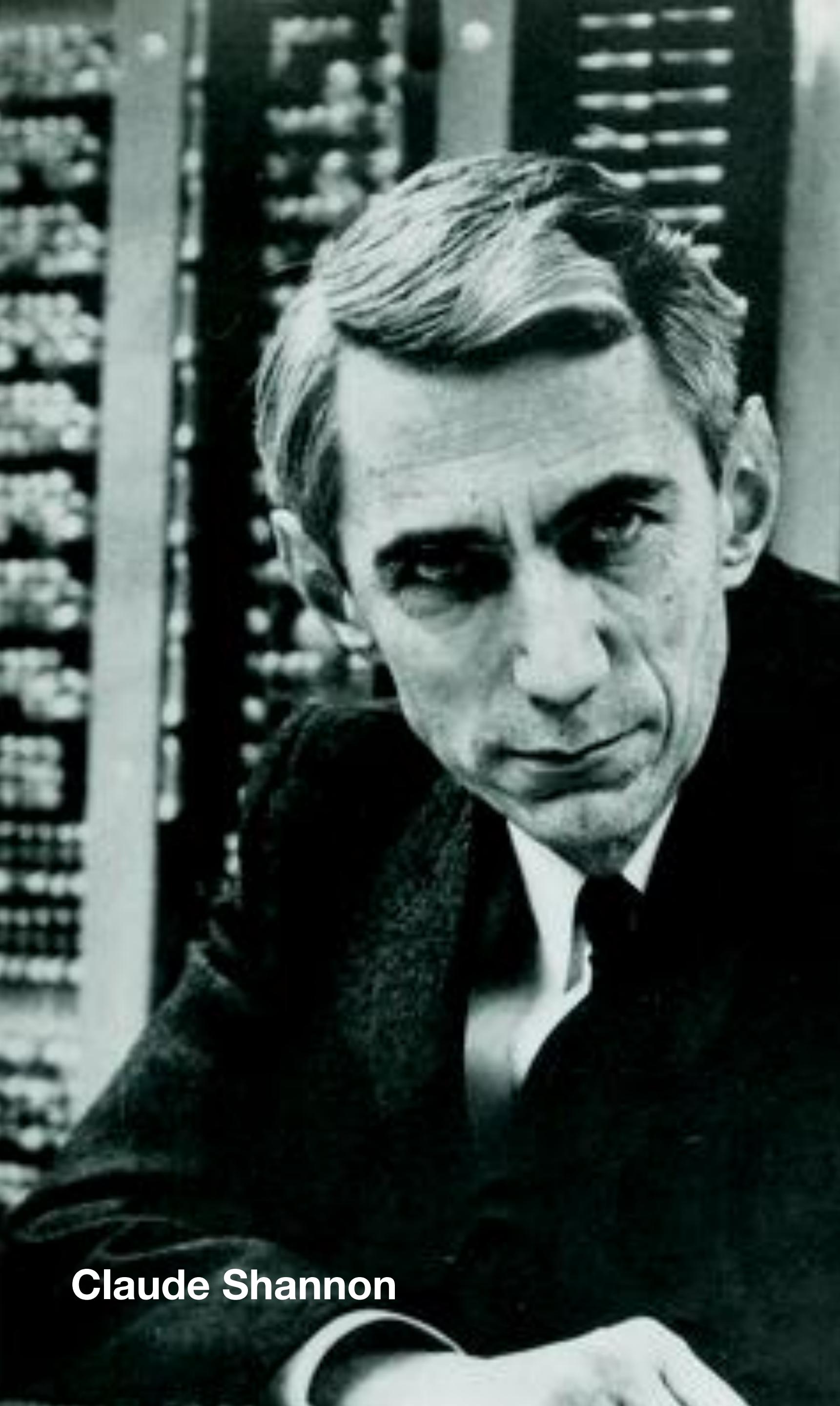
Digitale Revolution

Mentale Arbeit durch Maschinen

Programmieren ist Philosophie.



Alan Turing



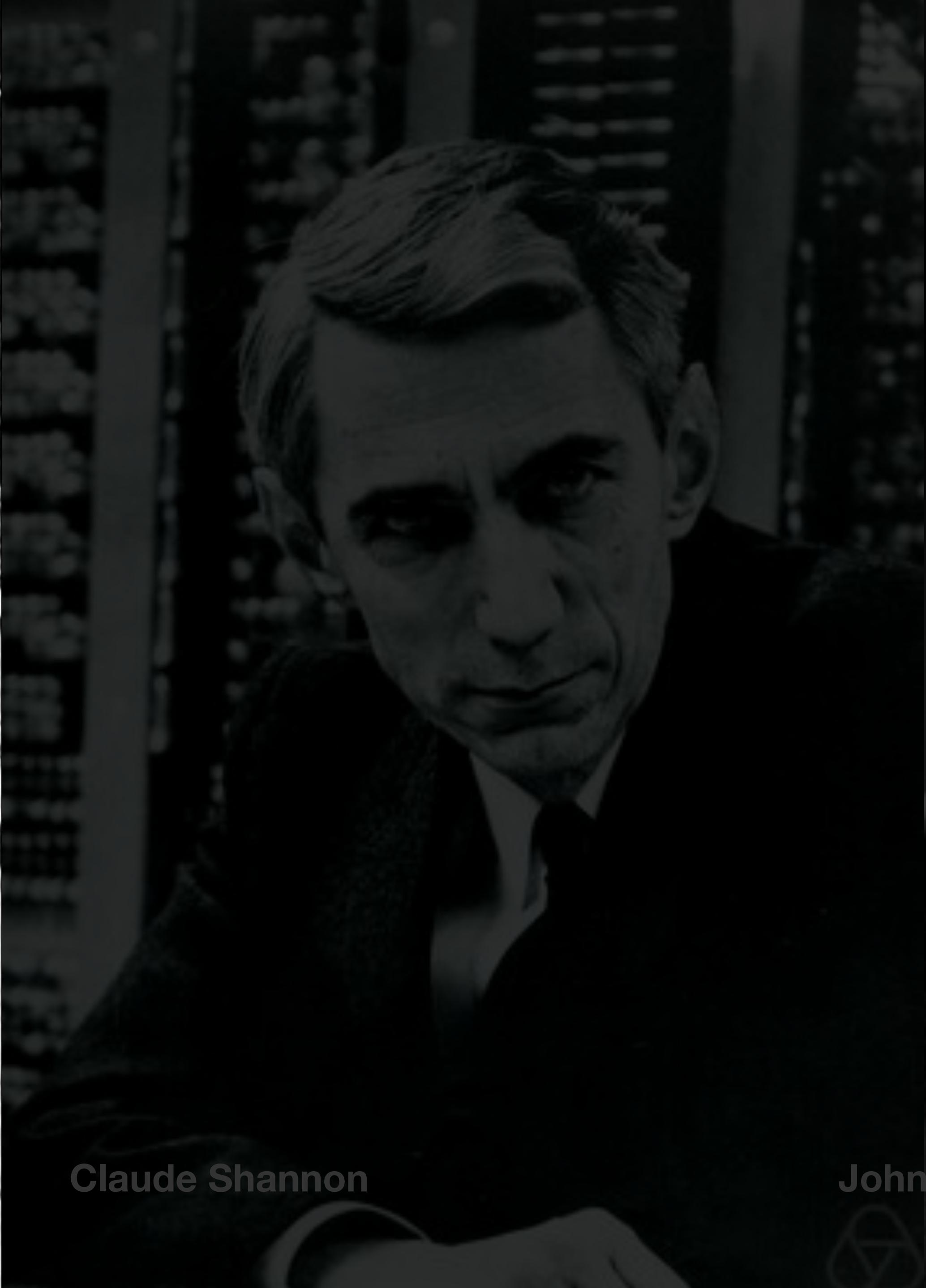
Claude Shannon



John von Neumann



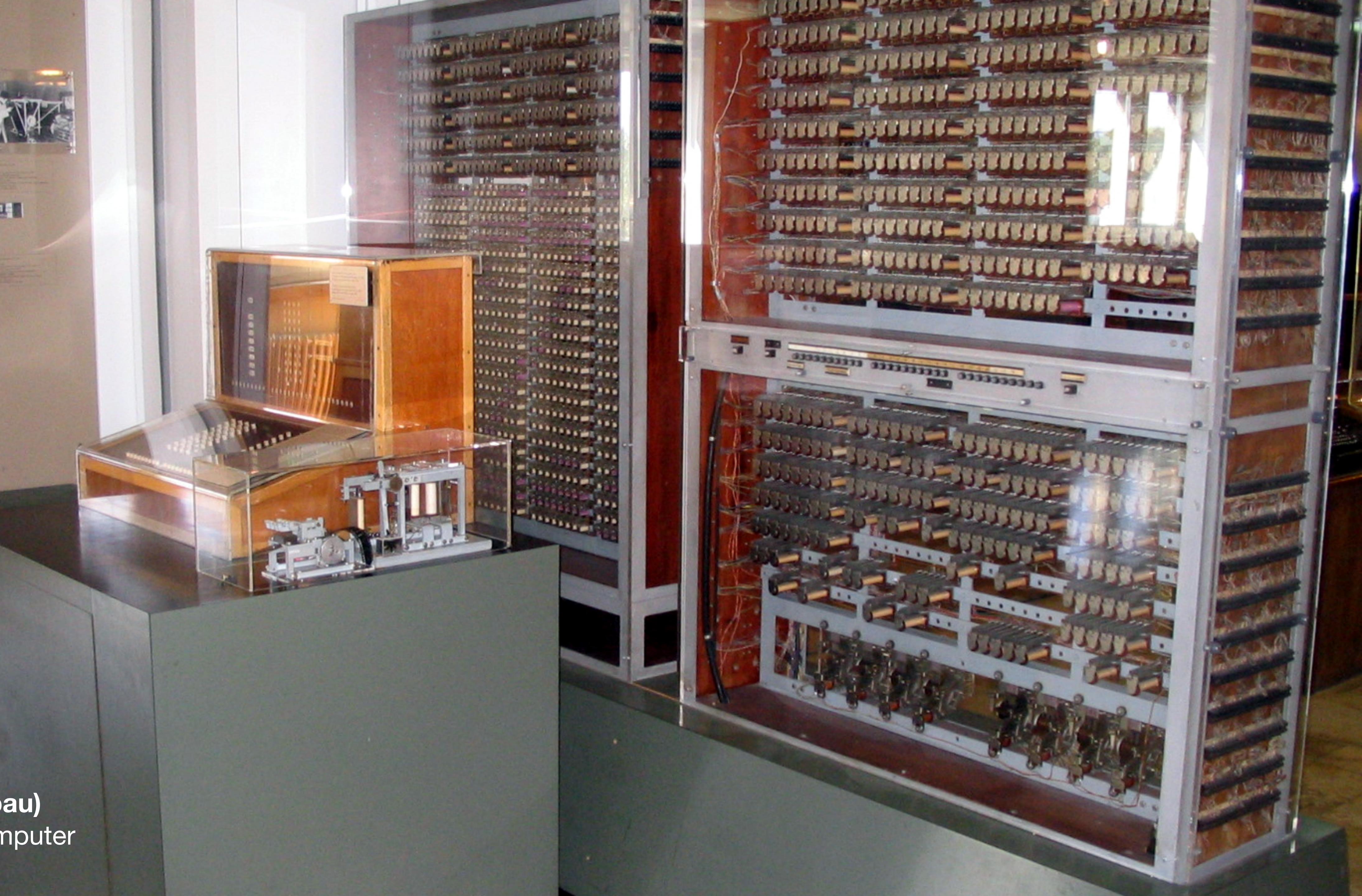
Alan Turing



Claude Shannon



John von Neumann



Zuse Z3 (Nachbau)

1941, erster Computer



British Bombe

Entschlüsselte ab 1940 ENIGMA Nachrichten

Programmieren ist Stärke.



Alan Turing



Claude Shannon

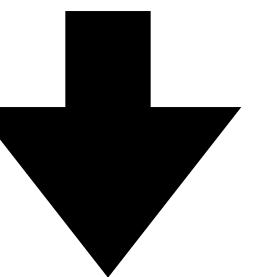


John von Neumann

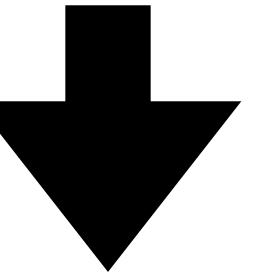
Information

Materie

Information



Algorithmus

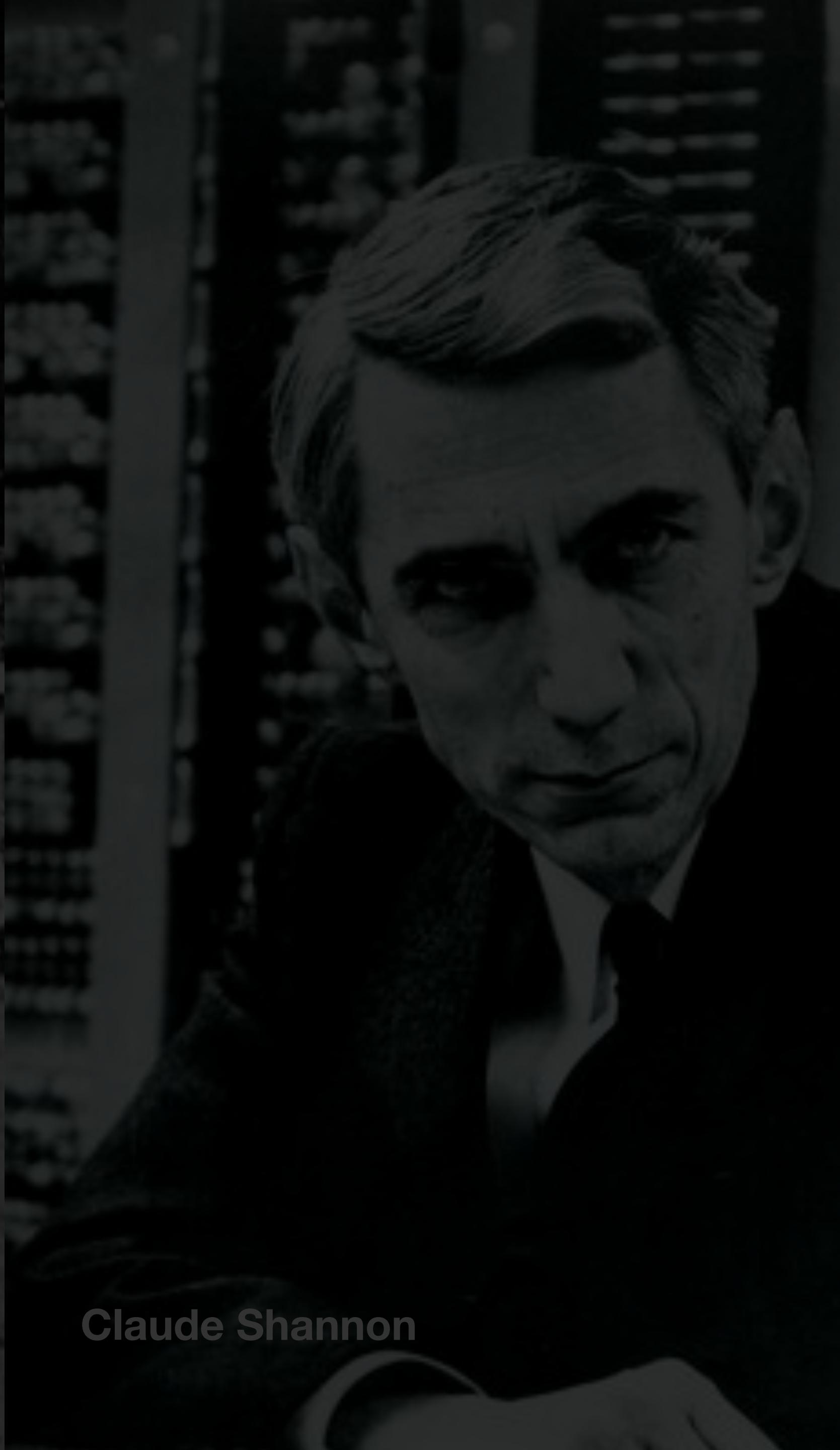


Entscheidung

Programmieren ist Erkenntnis.



Alan Turing



Claude Shannon



John von Neumann



Arthur Samuel

Computer können lernen (1956)

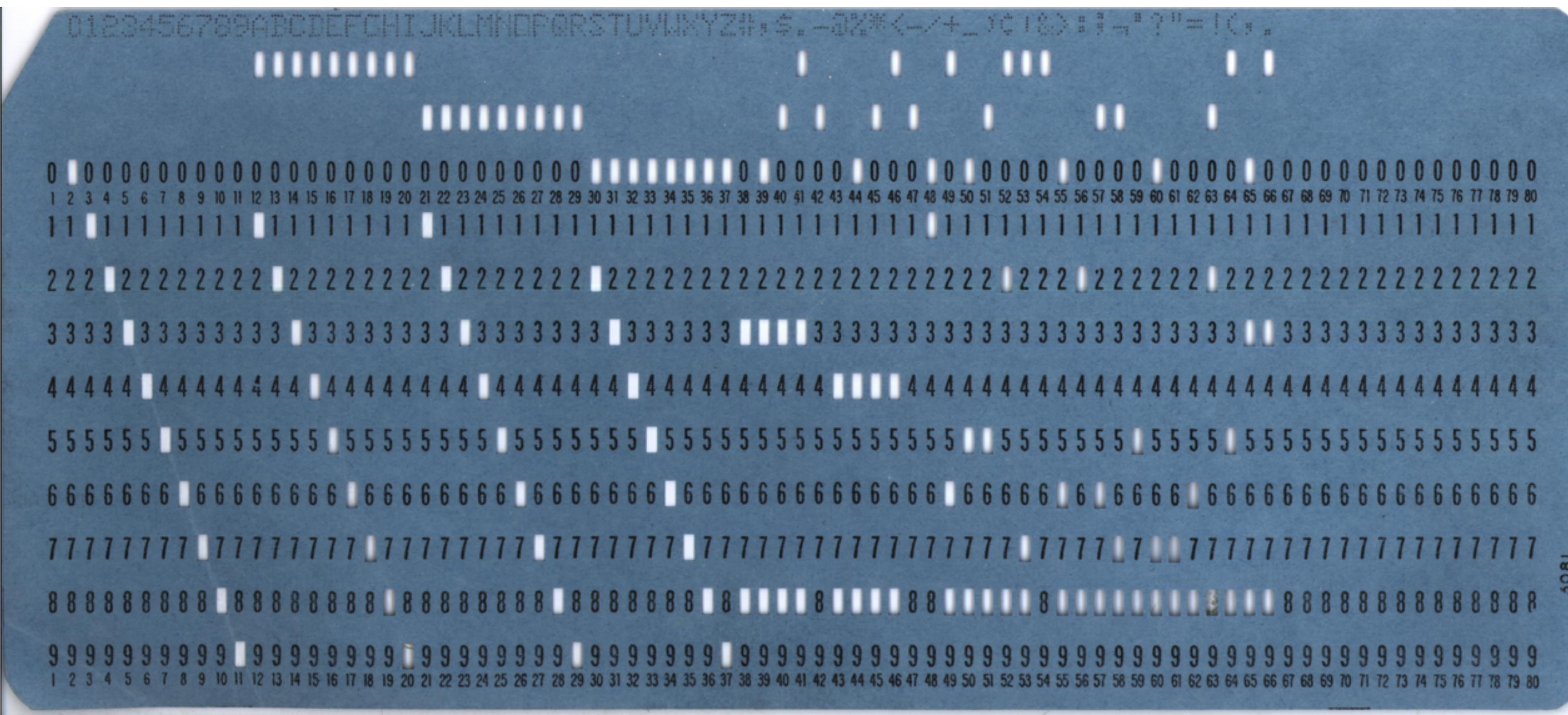
**Programmieren ist
Maschinenlehren.**



Buzz Aldrin

sicher auf dem Mond gelandet von 40.000 Zeilen Code

Programmieren ist Freiheit.

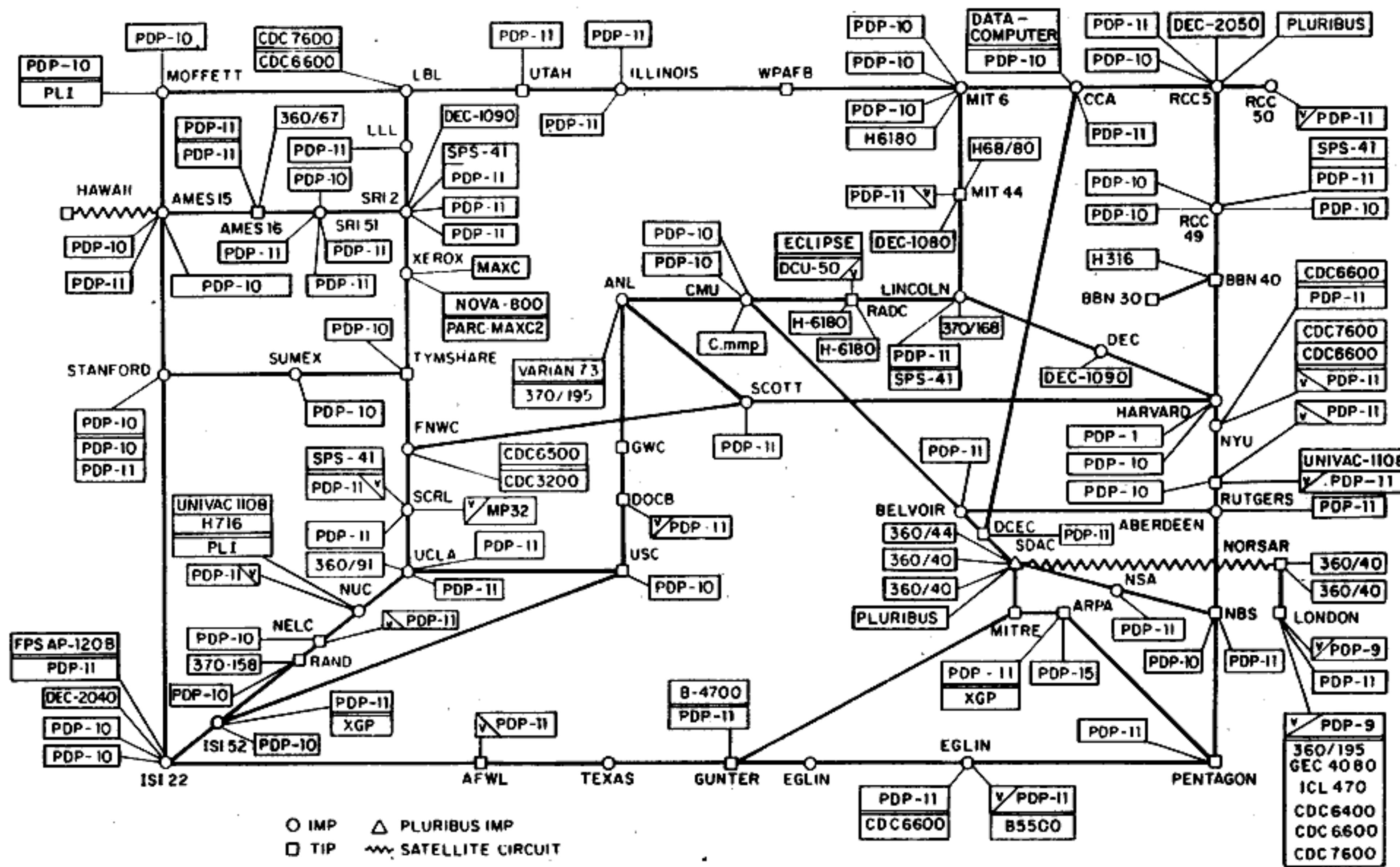


Lochkarte

Eine Zeile Code, in Verwendung bis in die 80er

Programmieren ist Ordnung.

ARPANET LOGICAL MAP, MARCH 197



(PLEASE NOTE THAT WHILE THIS MAP SHOWS THE HOST POPULATION OF THE NETWORK ACCORDING TO THE BEST INFORMATION OBTAINABLE, NO CLAIM CAN BE MADE FOR ITS ACCURACY)

NAMES SHOWN ARE IMP NAMES, NOT (NECESSARILY) HOST NAMES

**Programmieren ist
Kommunikation.**



Social Graph

Programmieren ist Politik.



Contributors

| | | |
|----|---|------|
| 1 | Microsoft/vscode | 19k |
| 2 | facebook/react-native | 10k |
| 3 | tensorflow/tensorflow | 9.3k |
| 4 | angular/angular-cli | 8.8k |
| 5 | MicrosoftDocs/azure-docs | 7.8k |
| 6 | angular/angular | 7.6k |
| 7 | ansible/ansible | 7.5k |
| 8 | kubernetes/kubernetes | 6.5k |
| 9 | npm/npm | 6.1k |
| 10 | DefinitelyTyped/DefinitelyTyped | 6.0k |

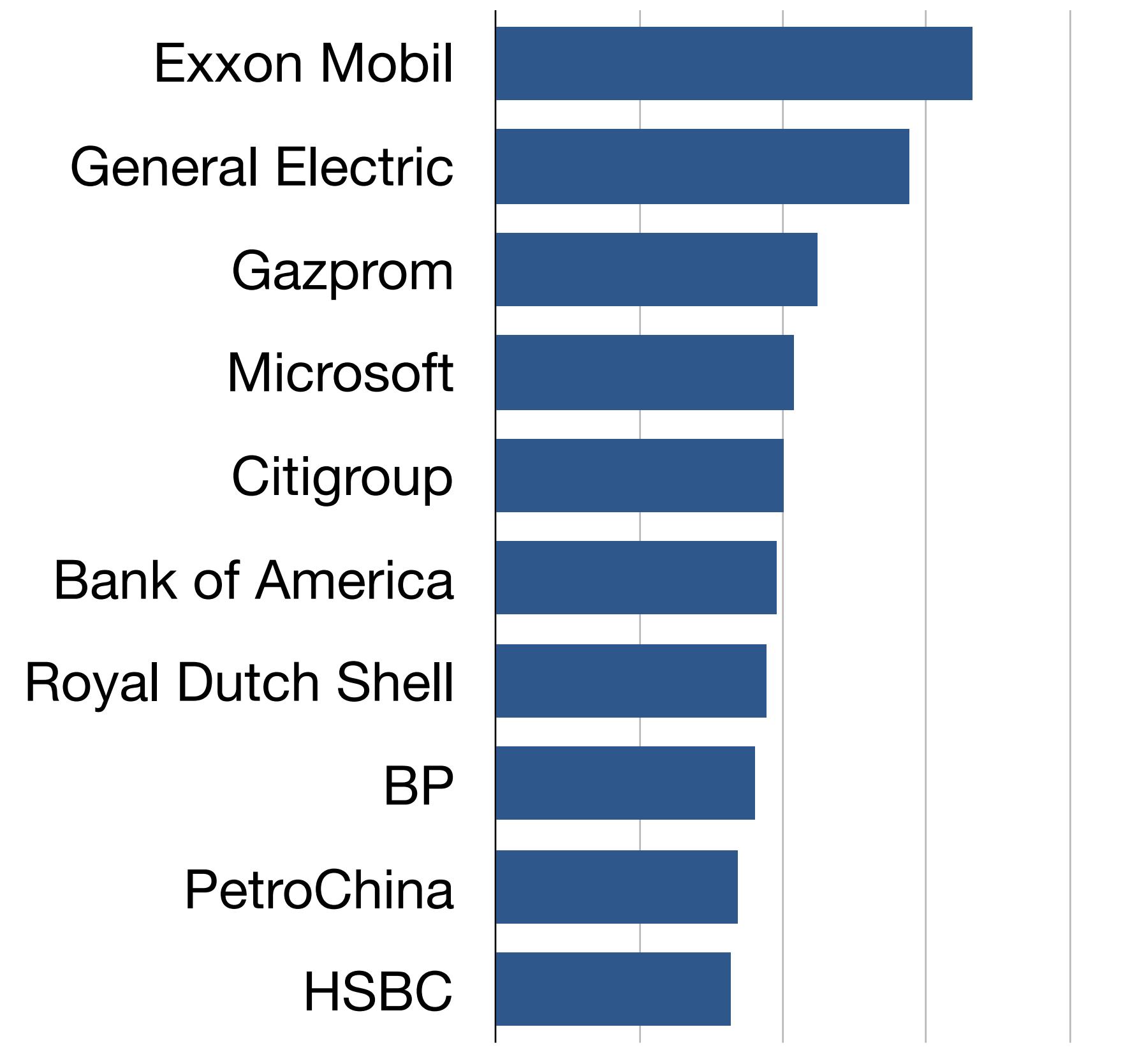
**Programmieren ist
Gemeinschaft.**

“Data is the new Oil”

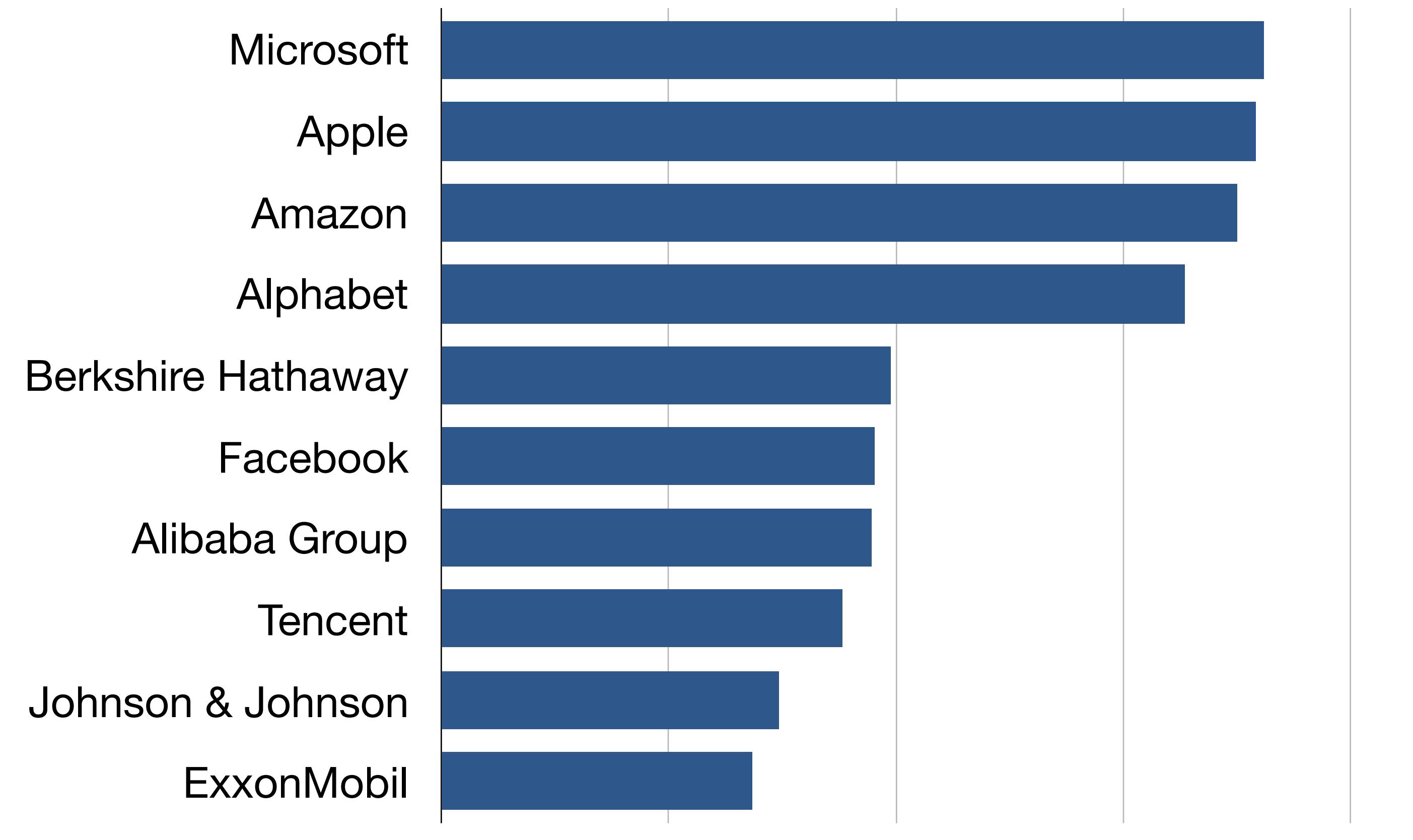
–Clive Humby, Mathematiker, 2006

Marktkapitalisierung der 10 größten Unternehmen

2006



heute



Mio. USD

Mio. USD

Programmieren ist Wirtschaft.

“AI is the New Electricity”

–Andrew Ng, Baidu, 2017

Google

Google-Suche

Auf gut Glück!

Programmieren ist Fortschritt.

SCRATCH

File Edit Tutorials Untitled-1 Share See Community Give Feedback scratch-cat

Code Costumes Sounds

Motion Looks Sound Events Control Sensing Operators Variables My Blocks

when green flag clicked

when space key pressed

when this sprite clicked

when backdrop switches to Jungle

when loudness > 10

when I receive message1

broadcast message1

broadcast message1 and wait

Control

wait 1 seconds

repeat (10)

when green flag clicked

forever

next costume

wait .5 seconds

when this sprite clicked

play sound Rooster until done

Stage Backdrops 2

Rooster Hen Hen2

Scratch Programmierumgebung für Kinder, entwickelt am MIT

The Scratch interface shows a project titled "Untitled-1". The stage features a farm setting with a red barn, a white hen, and a red-roostered rooster. The script for the Rooster sprite runs a "forever" loop that changes its costume every 0.5 seconds and plays the "Rooster" sound when it is clicked. The stage backdrop is a sunny farm landscape.

Scratch

Programmierumgebung für Kinder, entwickelt am MIT

Programmieren ist Gestaltung.