Istoria Informaticii course 10 pe bune

Imparatul Traian a cucerit Dacia pt ca stia ca acolo erau stramosii lui.

1968 -

“Serious sam” ??????????

Vannevar Bush –

Tim burners Lee

1889 – World Wide Web

Baiat facut sir de regina angliei

In ce an s-a intamplat

The mother of all demons

1968

Vannevar Bush

**Joseph-Marie Jacquard**

Masina de tesut jacar programabila cu punch cards

Poza aia de langa aparat e un covor

Nasa

Pentagonul din SUA

Baiatul cOmrade

In 2000 era un hacker de 15 ani care a spart serverele nasa si ale pentagonului

He then had a bullet salad as well

The treacherous 8

Ala care ridica paharul, Shockley, I s-a dat premium nobel pt transistor

Litera alfabetului care se leaga de acel device

Model **k**

Made by an engineer at bell labs, her name was given by his wife

The evolution of ethernet cable

Ce uneste toate acele contraptions?

Graham Bells

Cablu subatlantic de telegraf

In sec 19 pe final puteai sa suni din America in Europa

Isaac Newton wrote Principia Mathematica

Tedd Kazinski Manifestul

Elementele de geometrie – Euclid

Iohannes Bolyai

Kurt … - “a demonstrate prin matematica ca nu totul poate fi demonstrat prin matematica”

The art of computer programming written by – Donal Knut

Marvin Minski – the ai grandaddy

Dovada a teoremei lui pitagora pe placute din mesopotamia

War games – has matthew brodrick

The girl with the dragon tattoo

NU AM FOST LA SIRENELE LUUI ANDRA GOGAN

GABI NU NE MAI DA FILMEEEEEEE

Tom Cruise – Minority report

Hugh Jackman – Sword Fish

Jin Hackman - He died this year with his asian wife and his dog

Played in the composition

1989 primul african american character

4 actors

Reeever Phoenix

Si inca alti 3

Inca un film despre hacking wow gabi si zici de noi ca nu avem

The matrix

TANTI DIN MATRIX

Mark Walbert – a jucat in transformers in filme garbage

Celalalt actor a creat mapster

Mini Cooper

The Italian Job

Harry potter??????????????

Cel din dreapta l-a jucat pe boromir in game of thrones

Golden Eye – James Bond

Sandra Bullo (?)

The net

Ea era o hackerita care a mers in vacanta

„Pedofilul Sef?”

Una Bomber

Gucifer(?????????????)

John Mcafee

Edward Snowden

Kevin Bolson

Terris Andrew Davis

The hacker’s manifesto – Ottor

Company – Cambridge analitica

Dijsktra

Back Propagation

Simulated ?)

Convolutional Neural Network

Eratostene

Inverse sqrt

Convexhull

Huffman Encoding

Mini Max(?)

„Our journey of discovering informatics”

We emerge into the 70s

What happened during that time?

Bell labs come back into the spotlight bringing into the light The c programming language – the most low level high level programming language

Who are the guys? Ken Thompson si Dennis Ritchie

They were both working at bell labs. Using this language, they used the first operating system, named UNIX. They worked on a machine which allowed multiple users on the same machine (Main Frame Computers). Unix is a „diss” in regards tp the previous non fledged software system, called MultiCS. That sistem was scattered and non centered, which these guyys solved in the creation of UniX (X apparently just sounded cool)

The paradigm shift

What changed the economy of the world? An institution from America, which was a Stret – The Wall Street!!!!

On Wall Stret

„Greed is good” – Wall Street movie 1987 (WAS THAT THE BITE OF??)



The dicothomy between socialism and capitalism from america, the east vs west. The goal of the war was in the form of a competiton.

1. Who was the first in outer space

What was the first sattelite: Spudnick. When did the russians put it? 1957 (around the time the tranzistor was created (in 48))



Sputnick means – travel comrade

The first astronaut on the orbit? Yuri Gagarin

The name of the dog? Layla

The east was winning the space race until the moon landing

What was the first depiction of ai in a movie? Metropolis – 1927 In germany

INCA UN FILM MULTUMIM GABI

VREI SA INVAT LA MATERIA TA SAU SA MA UIT LA FILME

2 years before the moon landing

2001 space odysey

The moon landing conspiracy ”the coolest”

The shining conspiracy theory

Nu are chef gabi

Goign back to advancements

Apart from c and unix, we also have one more thing

By using an analogy:

What do you say to the god of death? Not today

The scope of intelligence is to help you not die/

What makes you smart – an informational system that can come up with new algorithms in real time from nothing in order to solve upcoming problems

Adopt Adapt Improve

See history from 3 perspectives

The history of cosmos

The history of life

The history of informatics

And how they are all the same

Bell Labs – energie si informatie

„Gabi” vrei sa mananci bataie

Nu de la miine ba~ 3:

Prima masina de calcul: Un monolith

What does monolith stand for? A structure made out of a single stone

What is the monolith in info? The touring machine

What is the monolith in life? The cave? (prima casa = primul monolith...?

Chiar ma asteptam sa zica ca e euglena

Looking back at life, there is first a monolith inside the virus (ce.)

Dicothomy is a system meant to split the whole in more, in our case in 2

The principle of dicothomy in informatics? Alan Turing works with john von newmann and then we get Eniac which \*separates\* the 2 things you can use with information (just like cosmos and life) sa o stocam si sa o procesam.

In the cosmos, the ever expanding universe created a dicothomy with the coming of mass and light (from gravity). We thus have some reactors of mass and energy called stars and an emission of information (through the speed of light – viteza prin care trimitem informatie)

How do we use this speed of light? Optic Fiber „stay tuned”

The biggest discovery in 70s is the ability to send info from one machine to the other: The internet / The ARPANet

In regards to the history of hummanity: We first start with cetati (celule care permit input si output, ca un calculator sau o celula...)

Toate sunt sisteme de energie si informatii

Ceea ce nu reprezinta ceea ce suntem noi = the environment

Forme de viata si Forme de viata inteligente

2 dimensiuni ale informatiei

Programul = software

Si implementarea lui

In celula, ribozomul primeste info din arn/adn care contine o succesiune finita de pasi si primeste ca input energia de la cloroplast si asigura mentinerea programului (arn) implementand sintetizarea proteinei

These analogies are so ridiculous you might actually understand them

The equivalent of a ribozhome from a computational point of view. The perceptron? No, that was the neuron

The jacqouard machine, however, is a ribhozome

Ca sa ai masina jacqouard, trb sa ai „mitocondria”. Care era mitcondria atunci? Motorul

The first computer was mechanic, just like the touring one. The jacqouard machine had as equivalent to arn punch cards

The rhibozome is „the masina de calcul” perfected by john von newmann based on the studies of the cell. Based on his thinking, he implemented in ENIAC, by working with touring and implemented thus an electric car.

That pc is recreation of cell

The mitochondria is brutar in a cetate

In cetate stocai informatie in tablite si procesata

Asta se intampla cu energie si membrana

Noi in absolut tot ce facem recreem celula

In ocean there are the first microbiotic creatures

The first breakthrough was the „domesticire of cal”. When we tamed the car we changed the game, since you could move faster.

At first, the ocean organism are algeee

The first breakthrough was movement: flageli, cili

Gandeste-te, pustiule: ca tu sa existi trebuia sa existe multi flageli

Abilitatea de a te muta cand locul devine naspa

Abilitatea de a modifica contextul

Dar STAI! Cetatea nu o poti misca. Ca alte organisme care nu se puteau misca

Avem organisme care se misca si organisme cae nu

Toate povestile din antichitate erau despre pradatori, care is catalizatorul evolutiei speciilor

Pana la Macedon, mentalitatea era de us vs them

Care era scopul pradatorilor: violau femeile, omorau partea masculina

Cu scopul de a „oblitera genetic”

Nu se gandea nimeni asa de mult la asta bro

Talk about lions mating

Back to us vs them

The first thing about technology is to kill it

What makes us do that? Entropy

Why do things change with macedon? What changes in nature. He kept everything he conquered (taught by aristotle)

THE BEGINNING OF AI???????

In order to have intelligence we need at least 1 neuron. Ai nevoie de dembrite si axon. Cum le numim in istorie? Drumuri

Ideea este ca: asta s-a intamplat si itnre celule. Mai multe celule au decis sa isi imparta intre ele sisteme digestiv -> tesuturi -> organisme multi celulare

Asa ajungem la cetatile grecesti which culminated with Macedon

How did he do it?

He had not yet succeeded in creating a neural network

We managed to reduce the computer from a building to a room to a wardrobe and to an even smaller unit called „pc”

We kept reducing the information unit

From tranzistor -> Integrated circuit

Intel 1968 came wuth the microchip

Alexandru macedon unified east and west and combined the oriental thinking, the persan knowledge and etc.

When a technology point of view, this happens in the 70s with the Pentagon Project – ARPA Net. Without UniX Systems, the C language with which we wrote sockets, the ability of software to send information, etc.

You had a modem, therfore

The ARPANet project lead to only the kernel of the internet

The purpouse was to unify the east and west of america and maybe even further beyond to europe

Back to bell labs, they started using the telephone cable to send information through the newly created modems.

While the framework of a neural network is made, there is not yet all we need

Macedon avvea nevoie de „energie” barbati, putere and then he gave back information (to the Alexandria Library)

Rome did not have their own culture, they took it all, the religion from greeces, from egyptians and created with the help of the army, a neural network.

The paradigm shift means that things changed radically, Until now info was the game of passionate people using philosophy:

Alan Turing was obsessed with a man

The issue is only now do things chage. Just like any technology, it has an impact on wall street,

It all starts from here: a new attitude

„Greed is good”

The atrepreneur mentality

„The role of the predator is to clean society of the malfunctioning organisms” kinda quote from the movie

Just like gengis khan

The paradigm shift comes from the idea of using software and hardware to SELL with this mentality

Microsoft, Apple and IBM

With the letter of bill gates begins the attitude that you need to pay for the software which can be multiplied continuously AND the hardware that contains it.

The open source movement therefore came

A young man was working at mit in the ai divison: richard stall..

He needed some acces to back code from UNIX

He requested and they refused

he became mad and therefore:

GNU (gnu is not unix, recursively)

The open source community came

They created mingw, gcc, g++

There is an ying yang dynamic between the people who want to make „poetry” and are curious and the people who want to create peopke

The 80s lead to pcs, the internet, every single home has a modem, start big software companies

In 1989 tim burners lee creates the html and http to transfer web pages which create websites and the world wide web.

In the 90s the world wide web explodes. The language who was supreme following c is

Anii 60 – assembly

Anii 70 – c, unix, operating system, ctp

Anii 80 – c++ (the paradigm changed to object orienting, which came from bell labs, asince they had access to the codew)

Anii 90 – JAVA LETS GOOOOOOOOOOOOOOOOOOOOOOO

Now everyone had a computer and they had either mac or microsoft or ibm pc and they all had a different c compiler

~the need of java code~

Along with java came jvm

La inceput de anii 2000 one of the most popular viruses

Y2k - virusul mileniului, we were not ready to add 2000 data to the pc

Bula .com (?)

.com comes from commercial (NU BAI, FROM COMLUMBIA DUHHHHHH)

Serialul produs de hbo numit silicon valley

Teh explosion of companies that provide e commerce

Java has 15 years. Of supremacy.

3 breakthroughr

cea agrara

Cea industriala/tehnologica

Cea informationala

In anii 2010

The breakthroughs within deep learning

Totul incepe cu crearea neuronului

[Frank Rosenblatt](https://en.wikipedia.org/wiki/Frank_Rosenblatt) a inventat perceptronul 1958

The term of hacker came from the guys from MIT who worked on artifficial intelligence

Since at first, being a hacker meant making practical jokes at the office

Richard Stalman was climbing inside the air shafts inside the corporation buildings and played games and pulling pranks

Minski, parintele ai-ului traditional a dat in cap perceptronului aducand prima iarna a ai-ului. The Andrew ... Deep learning course. Why was there a need of 30 years for stake holders to see the potential of ai? They had no vision of deep learning, why did it not happen until them. What prevented it? Underlying hardware

**[Linus Torvalds](https://en.wikipedia.org/wiki/Linus_Torvalds" \t "_self)**

Why did gpus have os much investments? Games. Before, most games ran on cpu.

MSDos

Dos comes from Disk Operating System

You could only see the cmd

Norto Commander

Aladin.exe (?)

Going back

What else did you need to feed a neural network? Personal information found through social networks (like facebook)

The Sigmoid activation function was replaced with relu

Deep learning models done by Geoffrey Hilton – 1947

What overtook java was python

The era of deep learning

We have e commerce and recommending systems

And here we are now\