

So what's this machine learning all about?



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Alex Whittles



- SQL Bits Committee
- Data Relay Committee
- MSc in Business Intelligence, CEng, CITP, FBCS, FIOEE, MIET, MIOD, MIAP, MIOEE
- Over 150 talks in 17 countries
- Run  purple frog BI Consultancy

sqlbits

DATA RELAY

SQLBits.com

DataRelay.co.uk



Business Intelligence Consultancy

Data Modelling

Data Warehousing

Cubes

Data Factory

Machine Learning

ETL Systems

Power BI

Azure

Databricks

Dataflows



Alex Whittles





DATAmasterminds



HEDDA.IO

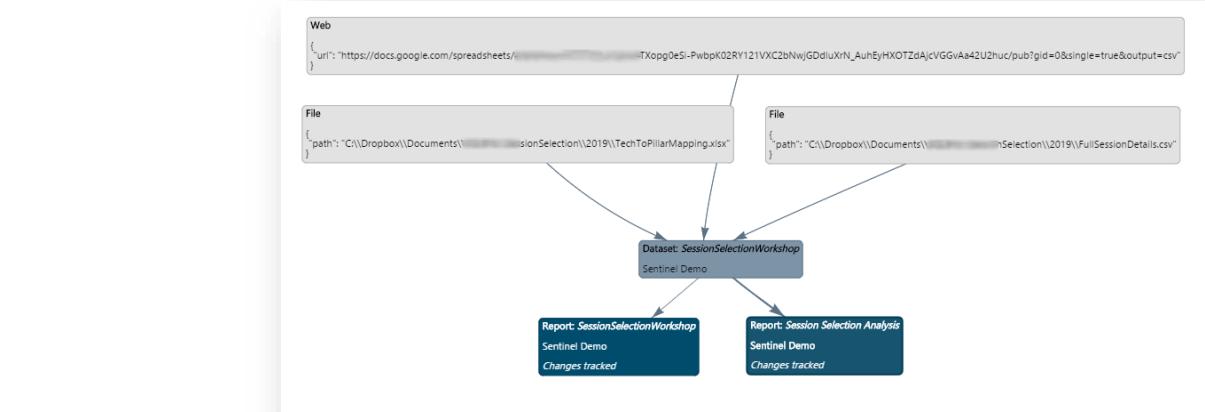


dbWatch
DATABASE CONTROL



POWER BI SENTINEL

- Automated Documentation
- Scheduled Backups
- Change Tracking
- Data Lineage Reporting



FactInternetSales

- DimProduct
- DimProductCategory
- DimProductSubcategory
- DimDate
- DimCustomer
- DimGeography

Connections:

Sql:

```
{"server":"pf-sqlserver16","database": "AdventureworksLT"}
```

Download Documentation

Measures

FactInternetSales: AvgSalesTaxAndFreight
SUM(FactInternetSales[SalesTaxAndFreight]) / COUNTROWS(FactInternetSales)

Expressions

FactInternetSales: SalesTaxAndFreight
FactInternetSales[SalesAmount]+FactInternetSales[TaxAmt]+FactInternetSales[Freight]

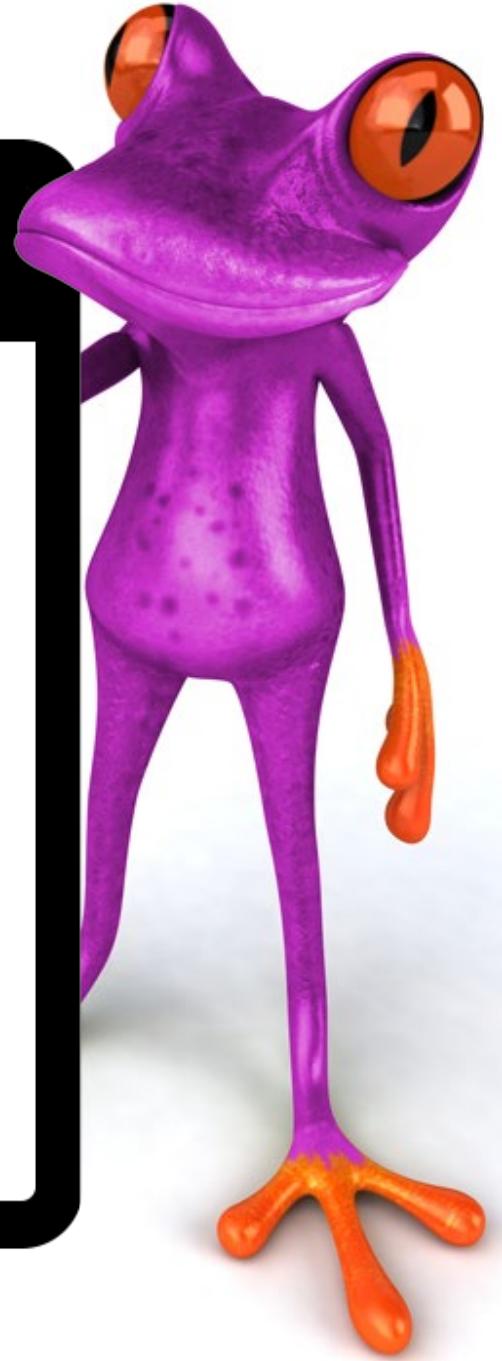
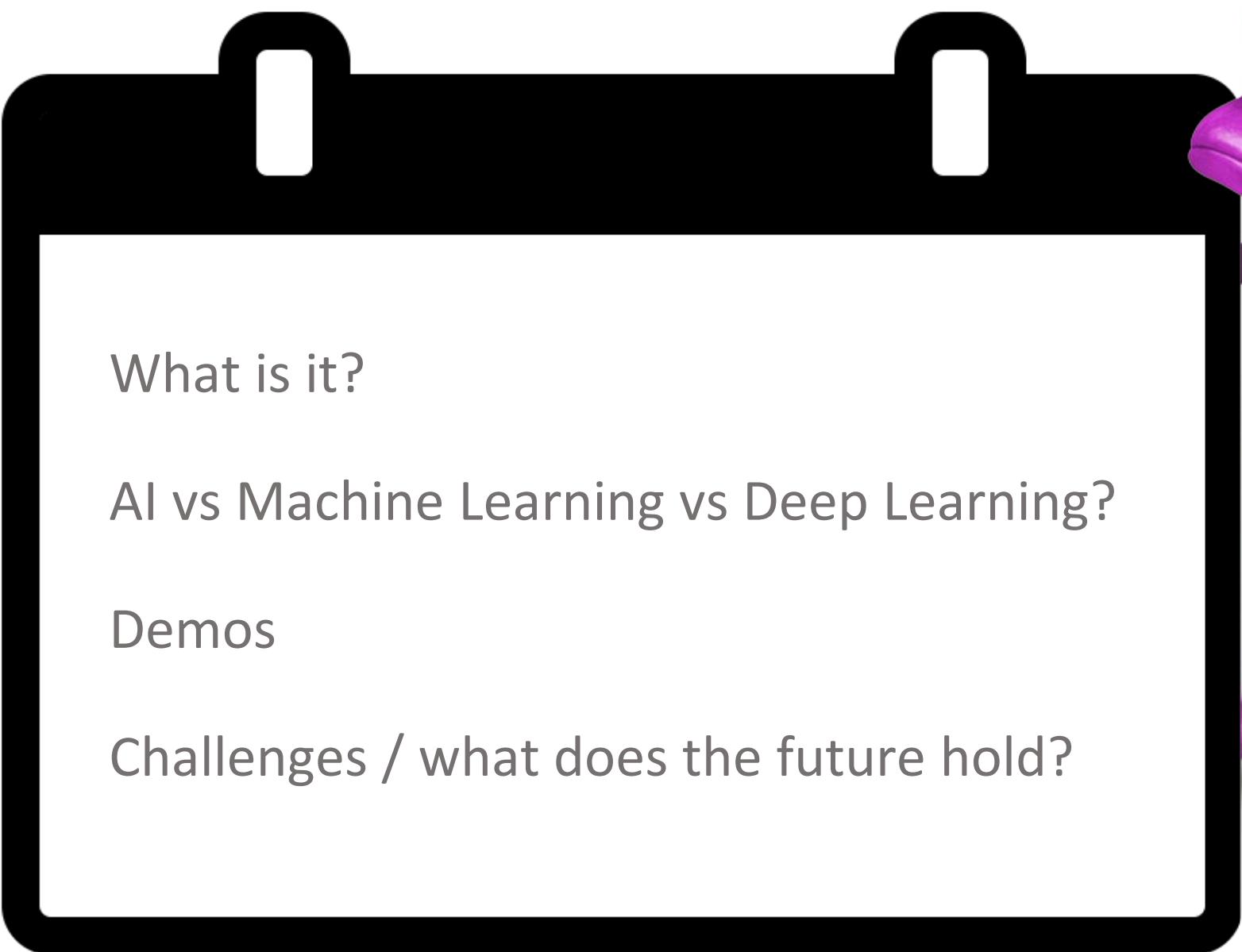


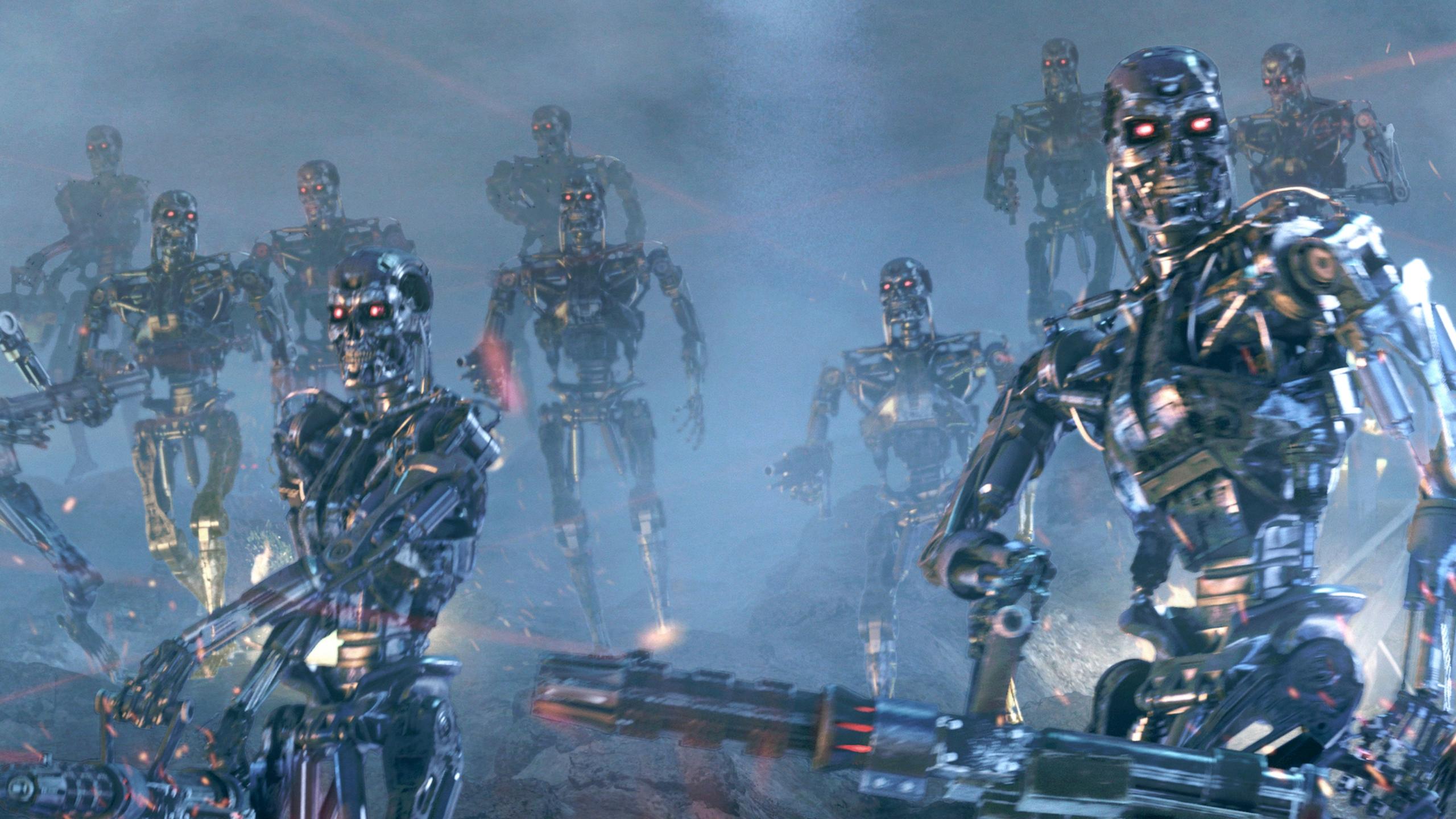
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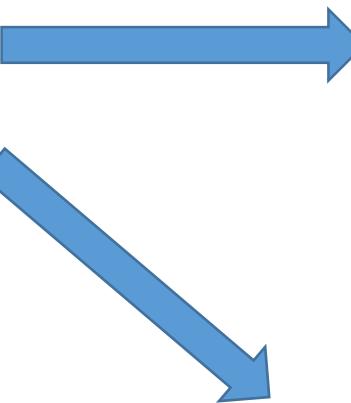
Agenda





Machine Learning in Today's World

Retail - Amazon



Frequently bought together



Total price: £25.11

Add both to Basket

Customers who bought this item also bought



Transformers Robots in Disguise Power Surge Sideswipe and Wind Strike Toy - Red
★★★★★ 39
£19.99 prime



50 Polka Dot Twist Ties For Cone Party Bags Cello Cellophane Bags Assorted Colours
★★★★★ 18
£2.45 prime



Banana Boat Kids Ultramist Spray Sun Lotion SPF 50, 175ml
★★★★★ 43
£7.72 prime



SainSmart Jr. Puzzle Ball Wisdom Ball 3D Intelligence Ball Game Magic Puzzle 21 Pcs
★★★★★ 47
£9.99 prime



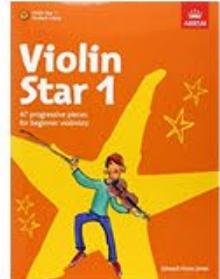
Trutex Limited Boy's Short Sleeve Plain Polo Shirt
★★★★★ 137
£1.24 - £9.95



The Wishing-Chair Collection: Three stories in one! (The Wishing-Chair...
Enid Blyton
★★★★★ 177
Paperback
£6.99 prime



The Magic Faraway Tree Collection: 3 Books in 1
Enid Blyton
★★★★★ 1,123
Paperback
£6.29 prime



Violin Star 1, Student's book, with CD (Violin Star (ABRSM))
Edward Huws Jones
★★★★★ 118
Paperback
£5.59 prime



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Machine Learning in Today's World

- Credit Scoring
- Customer Segmentation
- Post Office Image Recognition



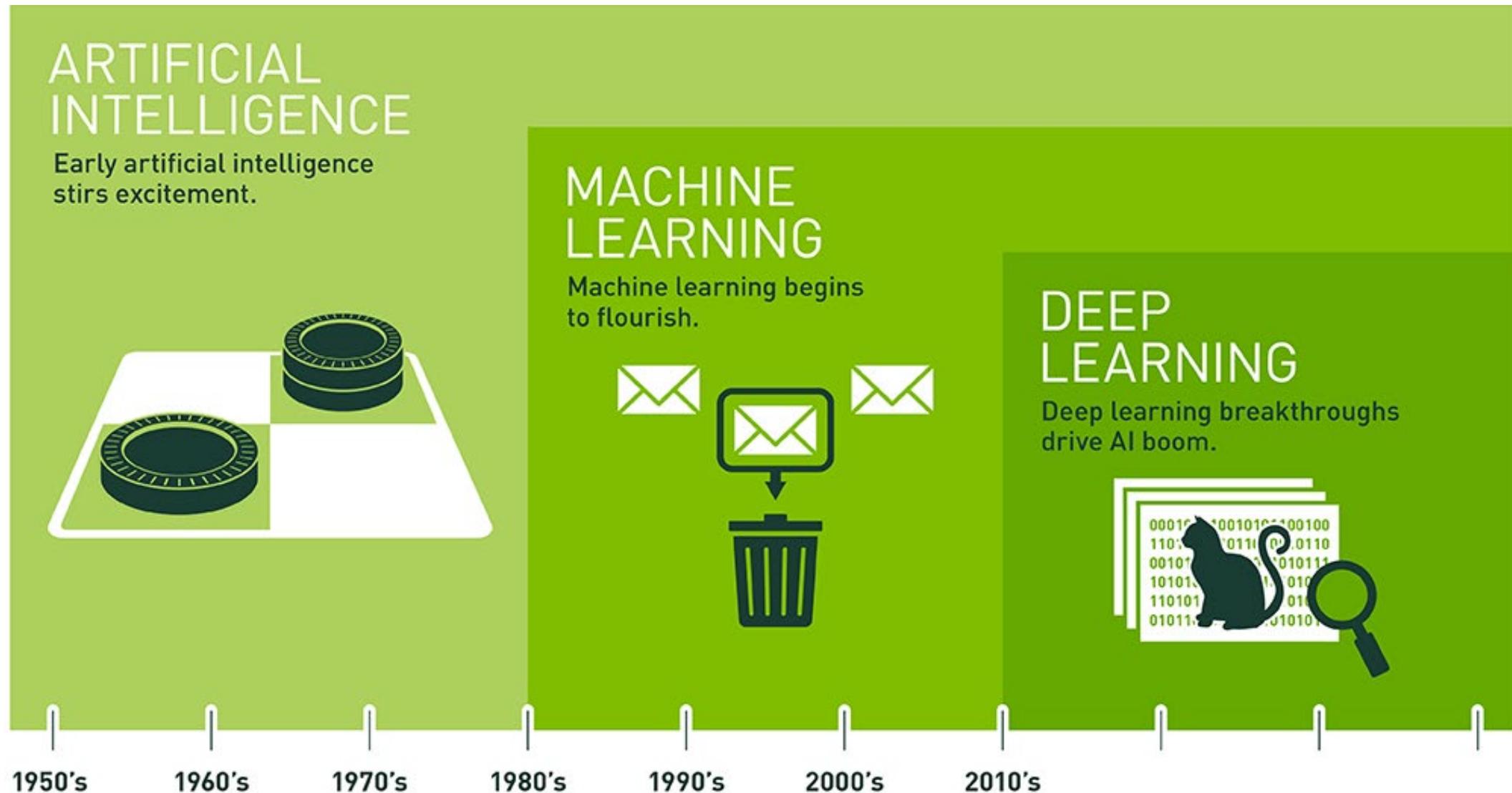
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AI vs Machine Learning vs Deep Learning





Training -> Testing -> Production Use

- Teach using examples

TRAIN

Teacher provides problem & answers

Student learns generic approach, not memorising answers

- Test using exams

TEST

Teacher knows answers, students don't

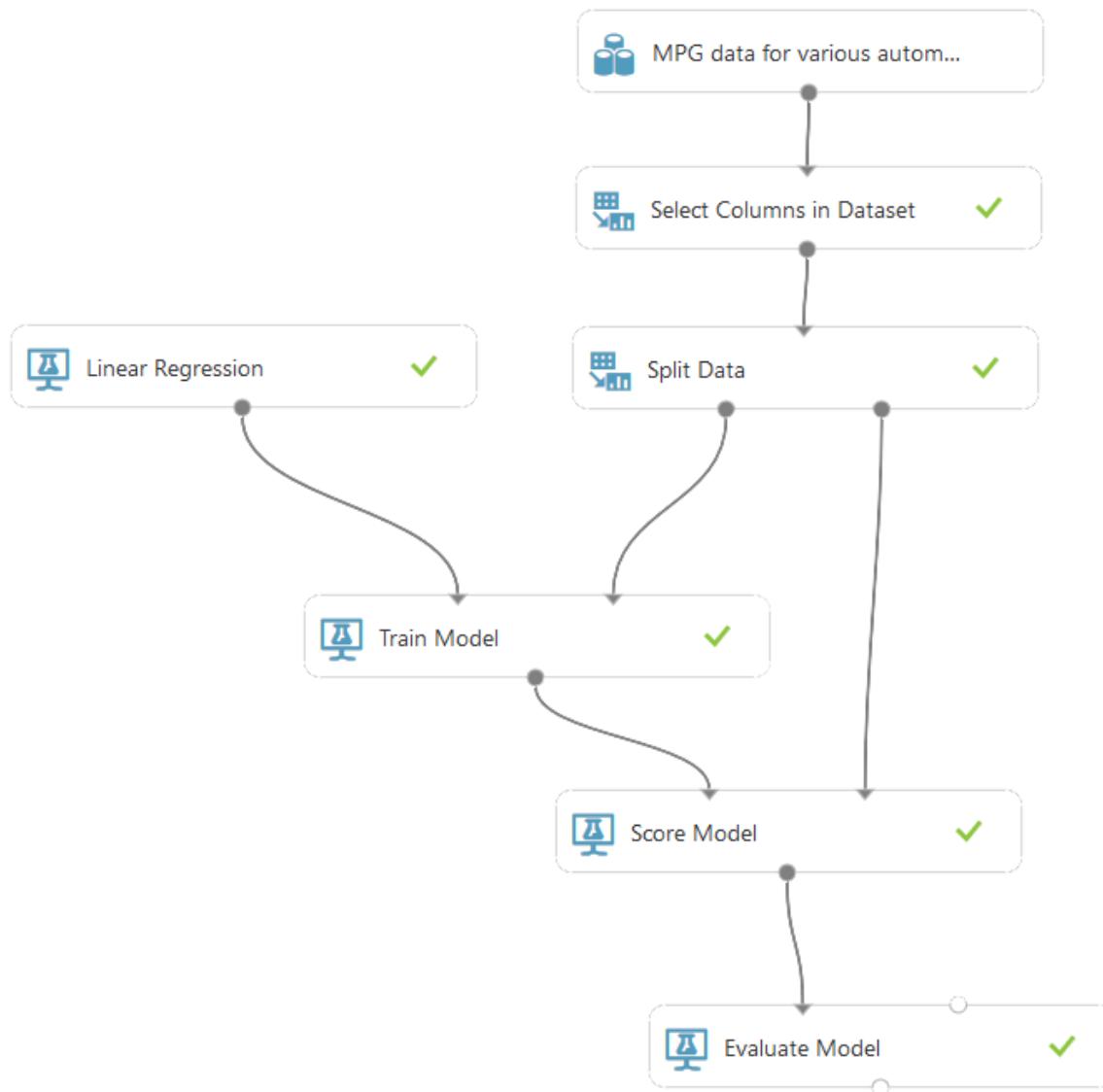
Score the results

- Best students go to university or get jobs

PRODUCTION



Demo



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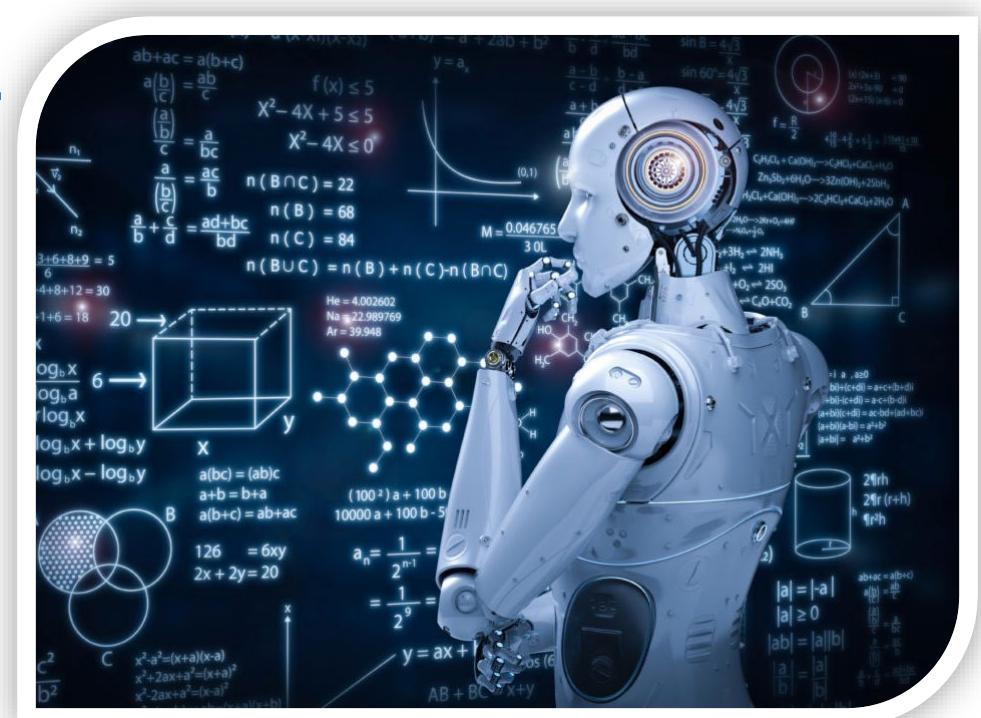


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<https://aka.ms/automatedmlsamples>

<https://aka.ms/AutomatedML>

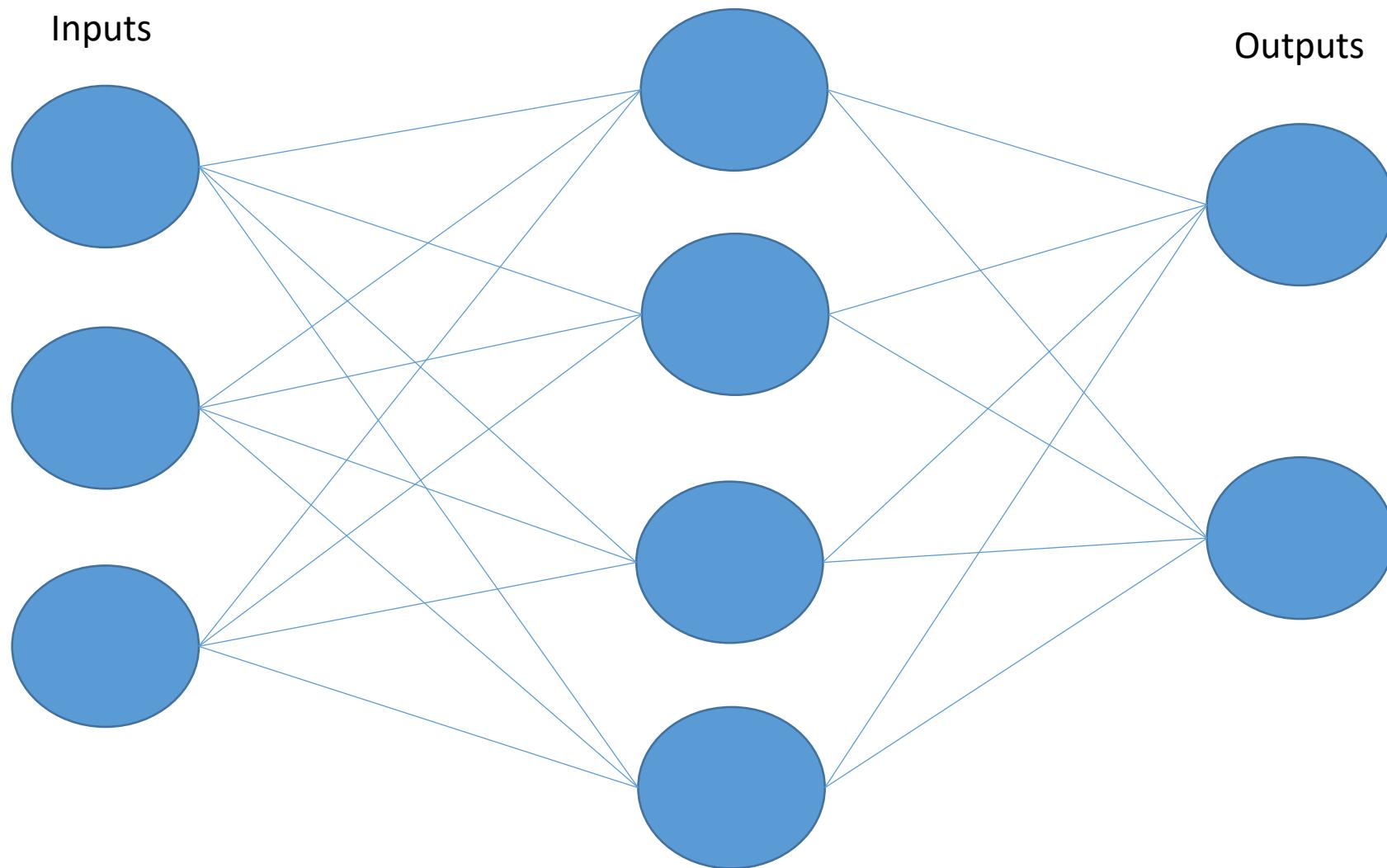
<https://aka.ms/mlfree>





Deep Learning Neural Nets

Hidden Layer



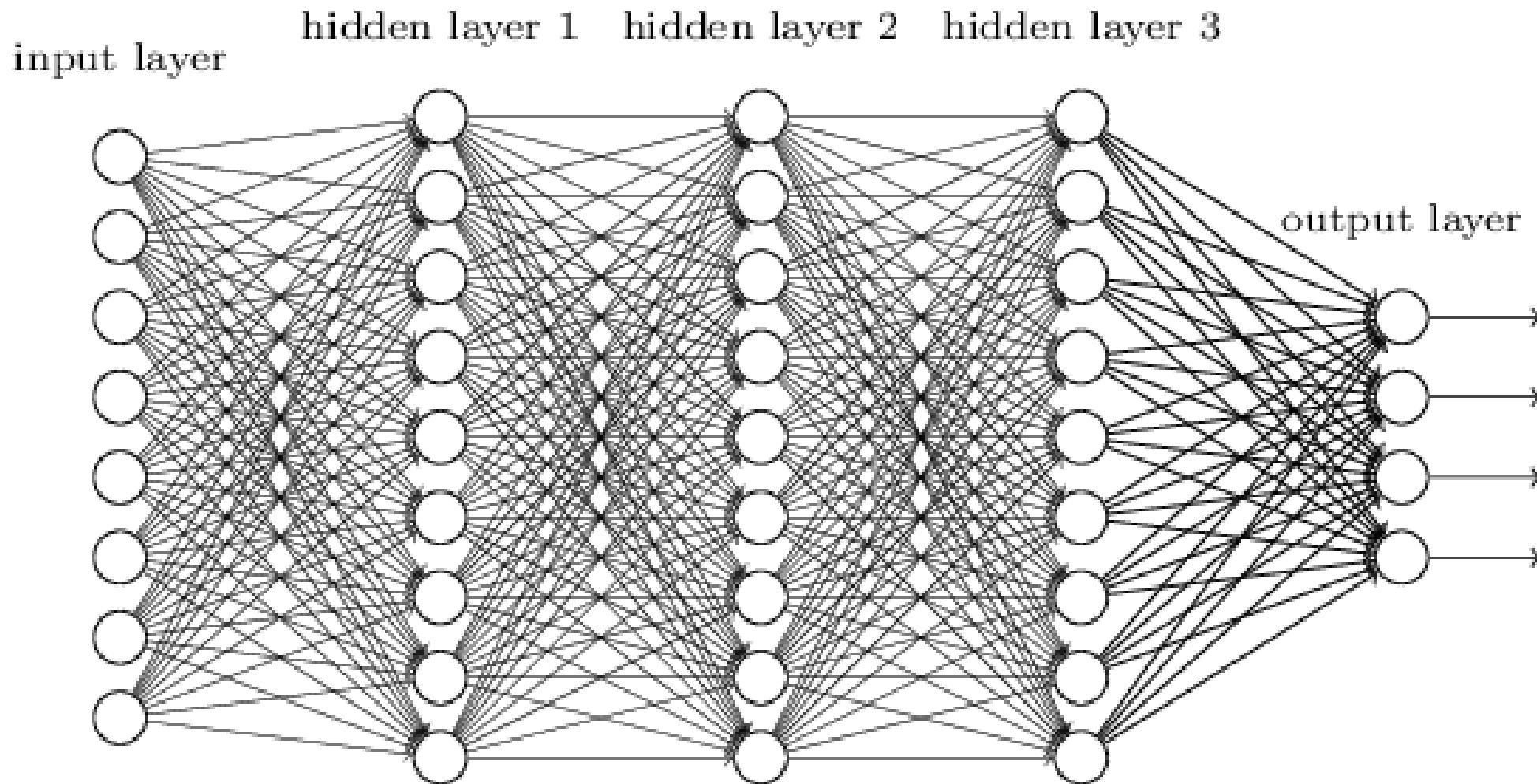
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Deep Learning Neural Nets



Demo



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Resources

<https://studio.azureml.net>

Harrison Kinsley / @Sentdex

<https://www.youtube.com/user/sentdex>

<https://Gym.OpenAI.com>



Market summary > NVIDIA Corporation

NASDAQ: NVDA - Jan 11, 9:55 AM EST



224.73 USD ↑ 1.05 (0.47%)

1 day

5 day

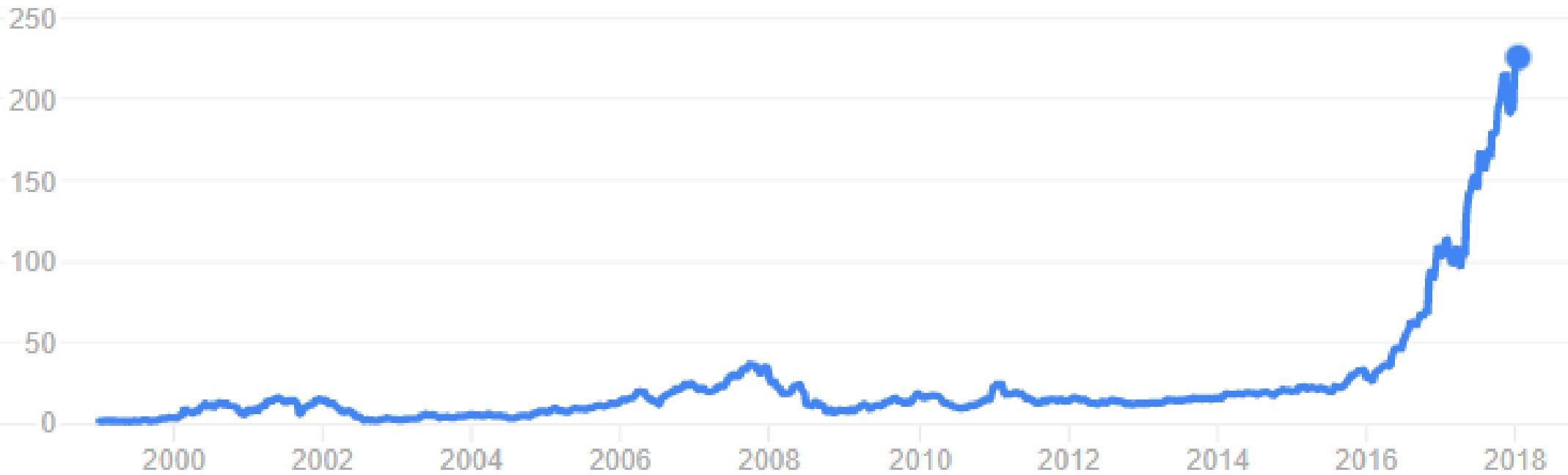
1 month

3 months

1 year

5 years

max



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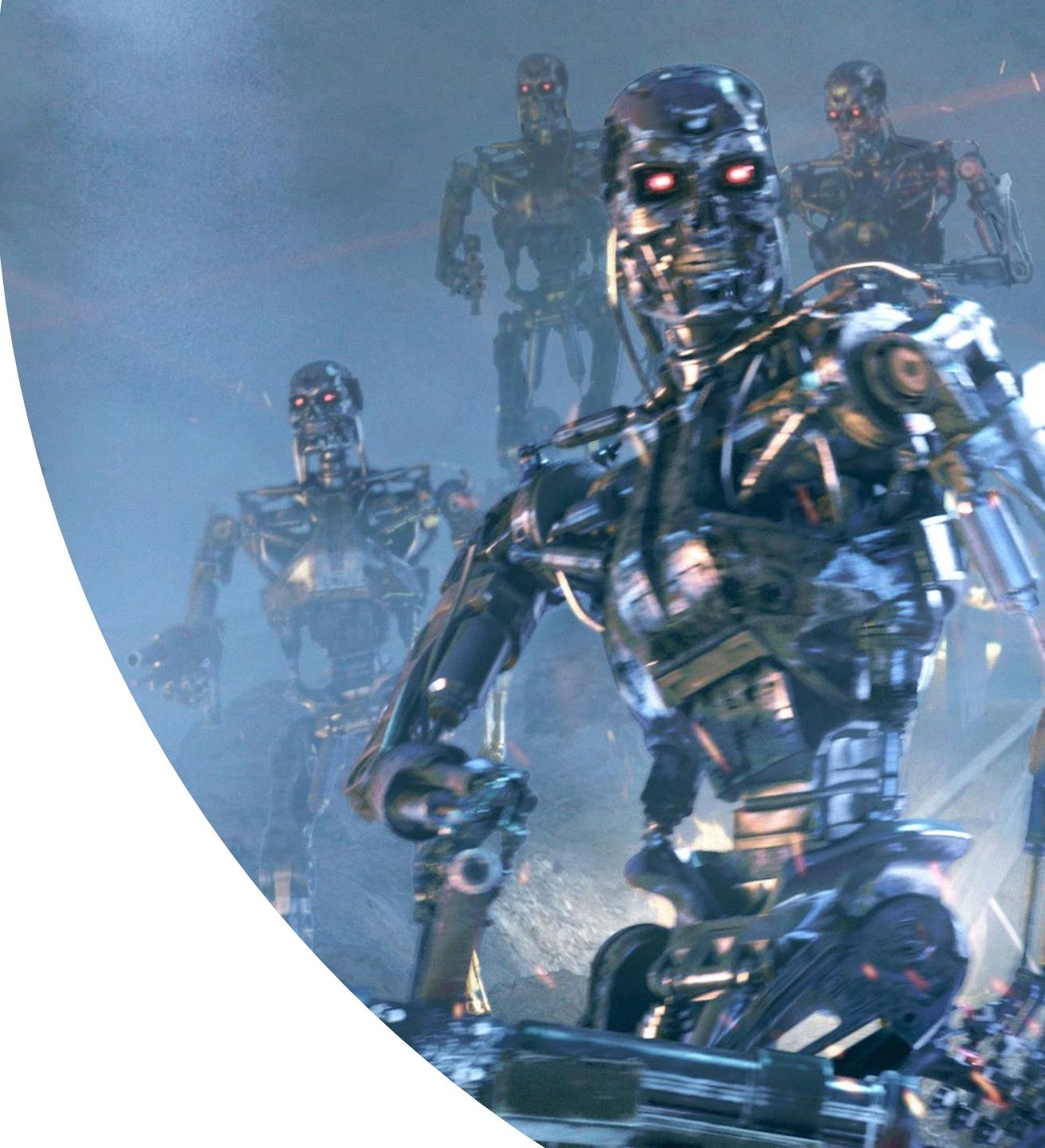
Are We Doomed?

Ethics

Control

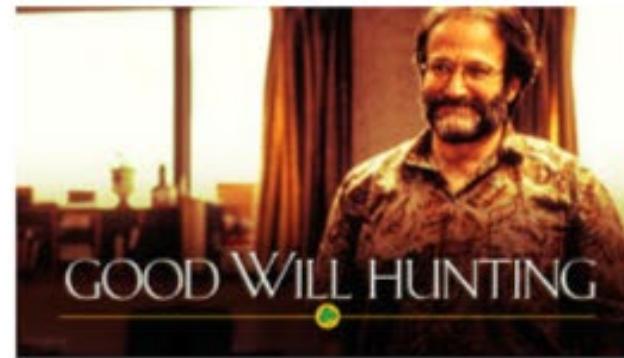
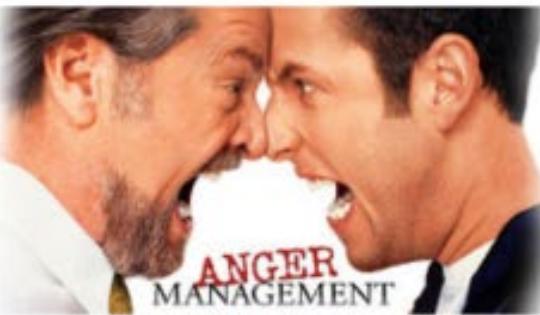
Killing Machines

Replacing Jobs



Ethics

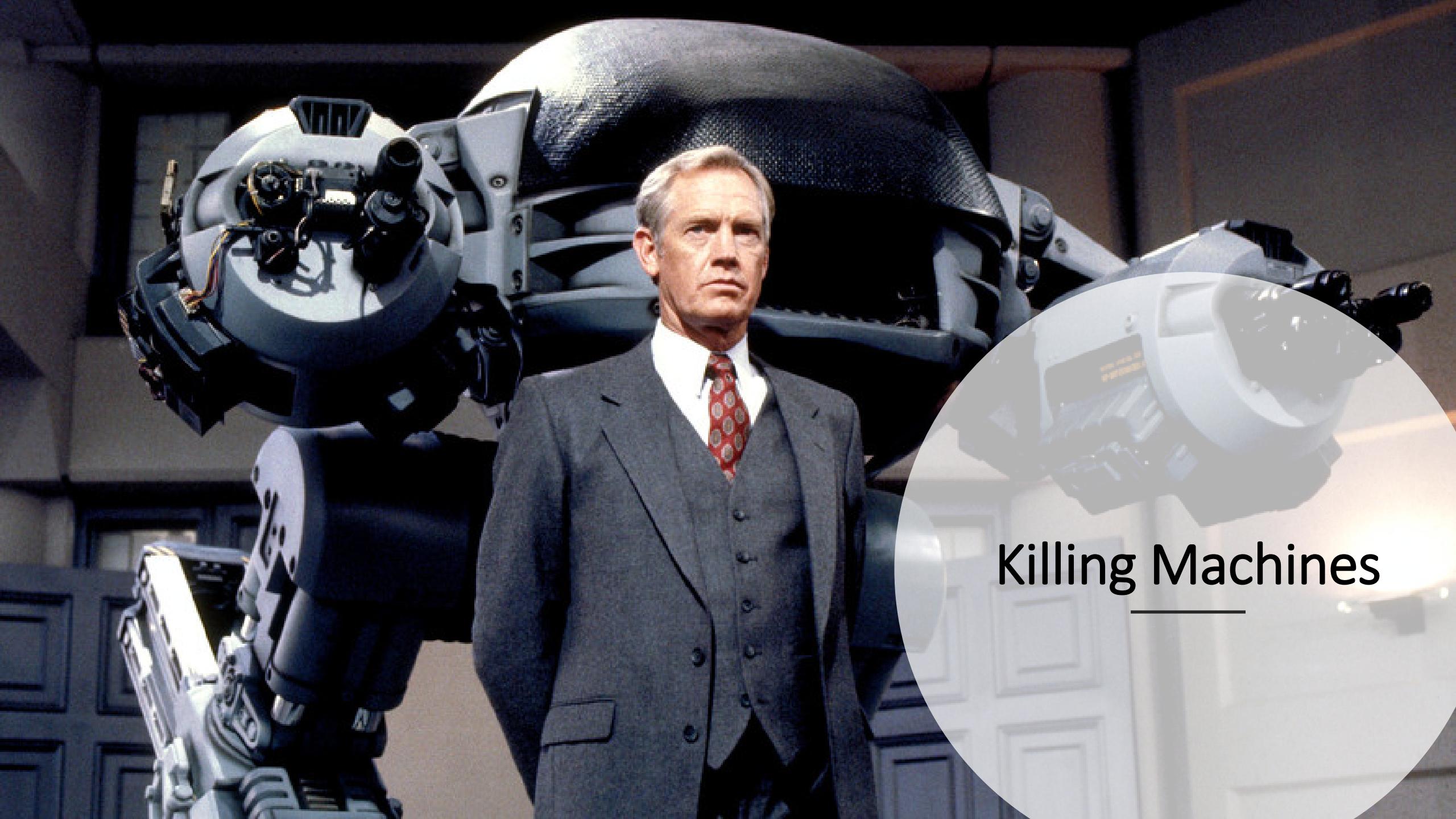




Ethics

Control



A composite image featuring a man in a grey suit and red patterned tie standing next to a large, white, articulated robot arm. The robot has multiple joints and a gripper at the end. In the background, there's a large, dark, spherical object, possibly another robot or a prop. The setting appears to be an industrial or laboratory environment.

Killing Machines

| Can you spot the difference?

Can you spot the difference?

<https://www.youtube.com/watch?v=Hg-h5KporSk>



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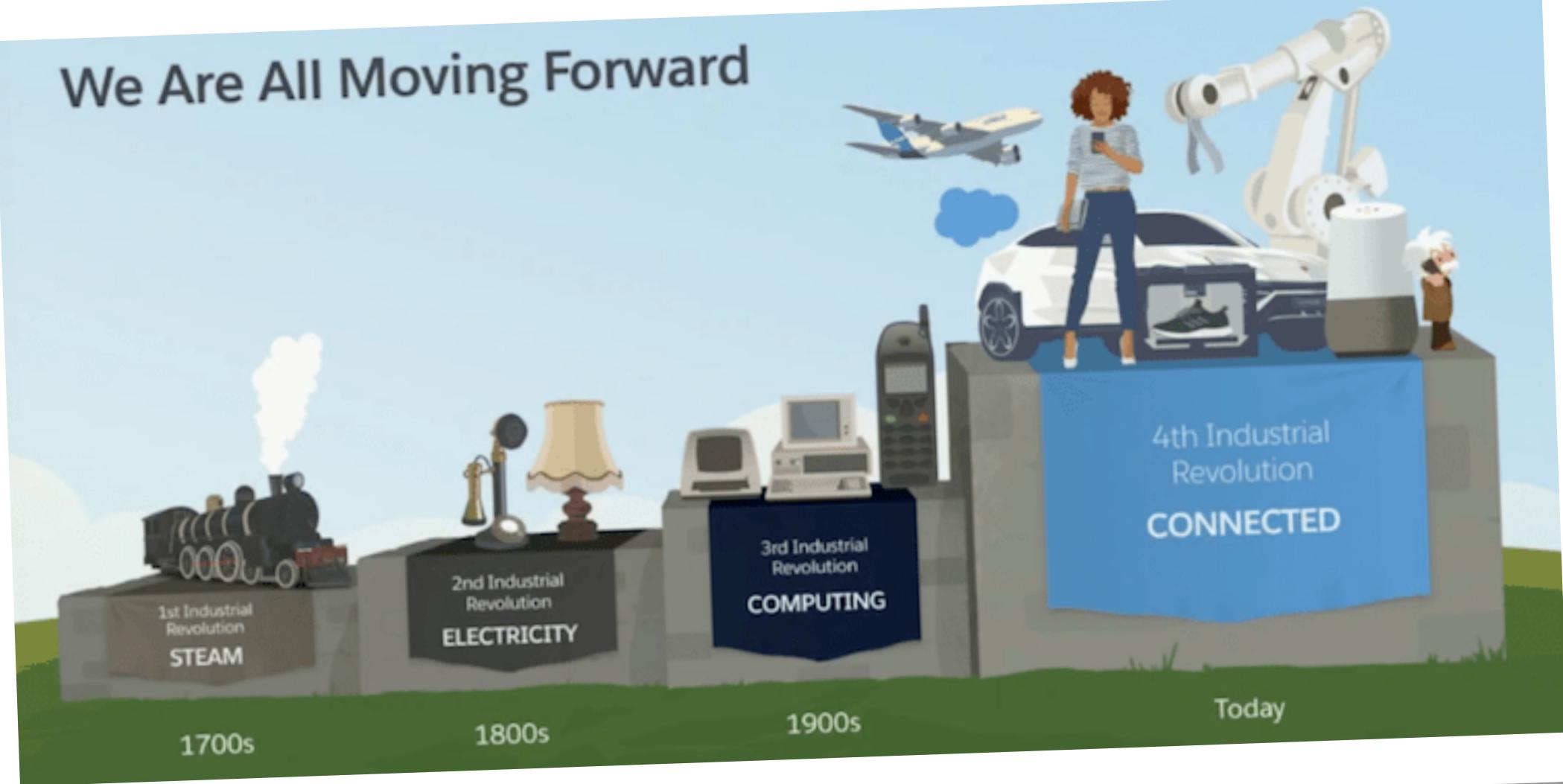




Unemployment

WillRobotsTakeMyJob.com

We Are All Moving Forward



So what's this Machine Learning all about?



Questions?

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Session Feedback Day 1 (not optional!)

<http://bit.ly/DataGrillen2019Day1>



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Event Feedback (not optional!)

<http://bit.ly/DataGrillen2019Event>



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