

Understanding Python & Artificial Intelligence

Hosted by IC– 07/16/2021



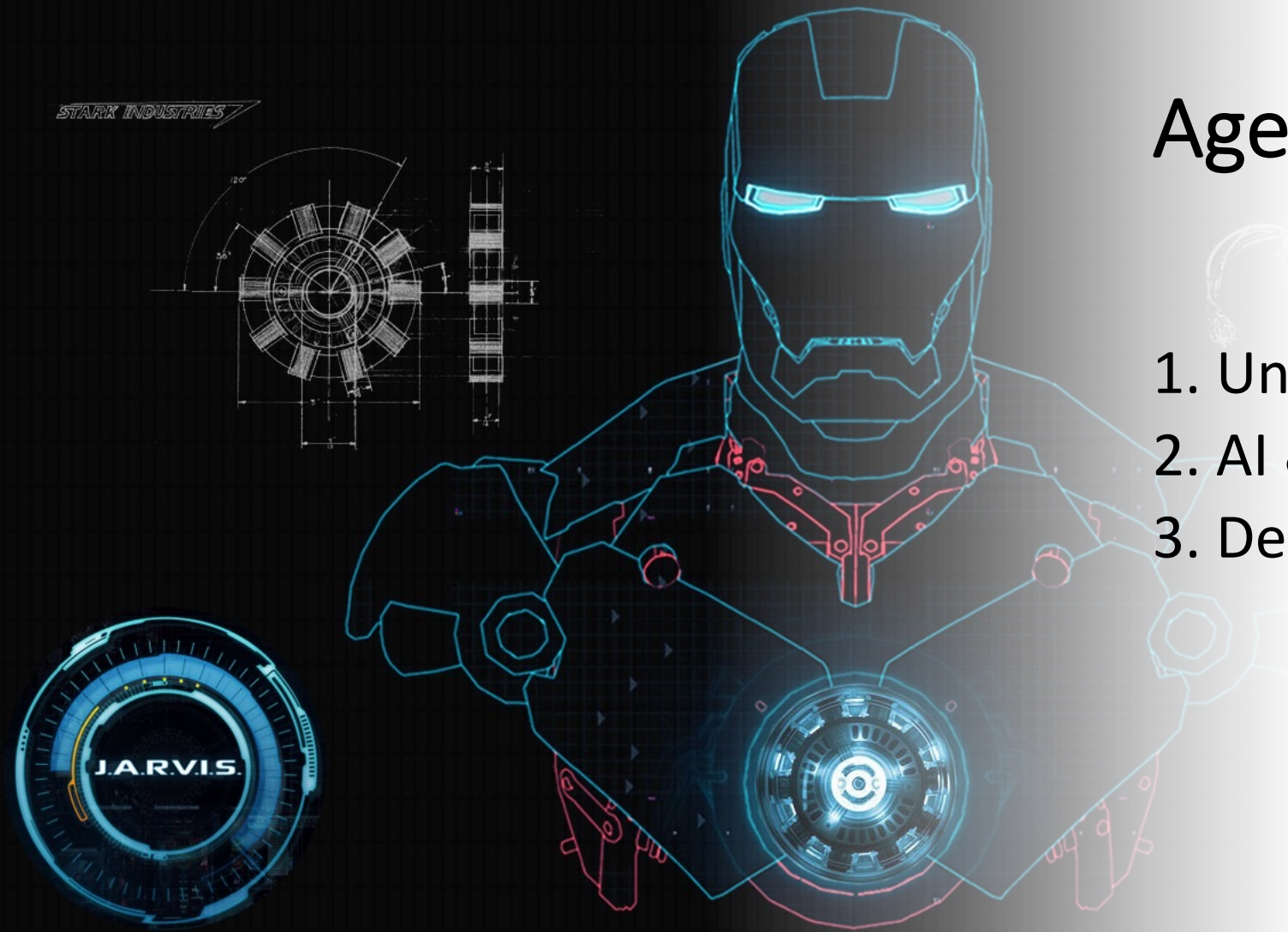
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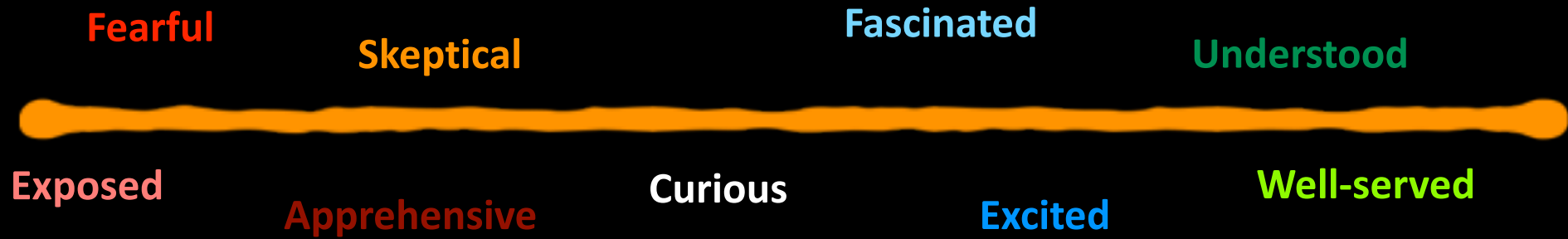


Agenda

1. Understanding AI
2. AI & Python
3. Demo

AI Perception

What do people feel about AI?



What is AI?

What is AI?

Artificial Intelligence | noun

An area of computer science that emphasizes the creation of intelligent machines that work and react like humans.

What led to the prominence of AI?

Data explosion

Computing power

Deep learning algorithms

What is AI?

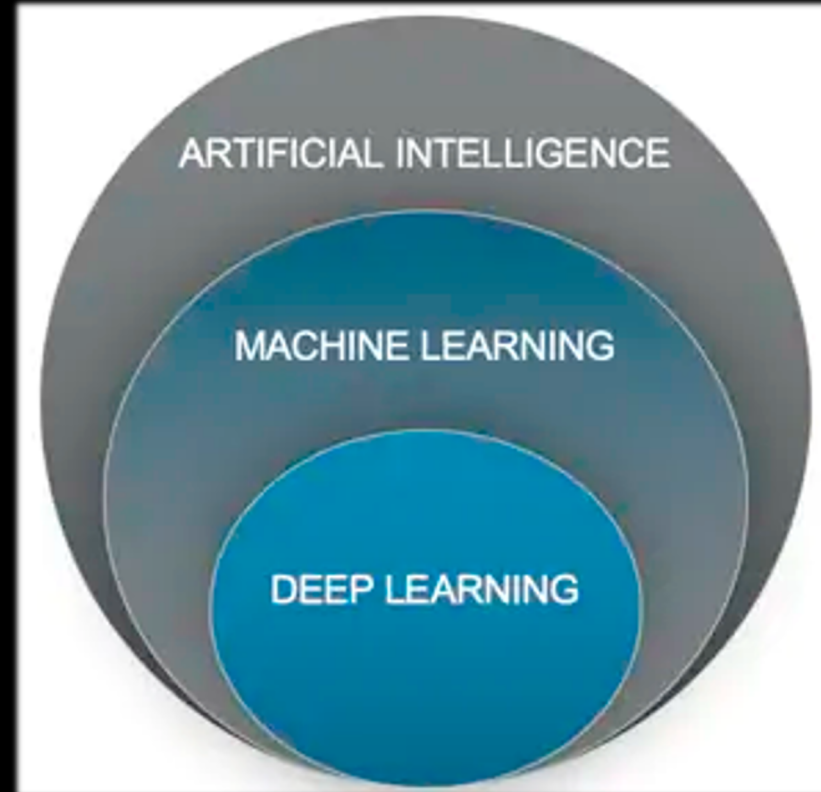
Artificial Intelligence | noun

An area of computer science that emphasizes the creation of intelligent machines that work and react like humans.

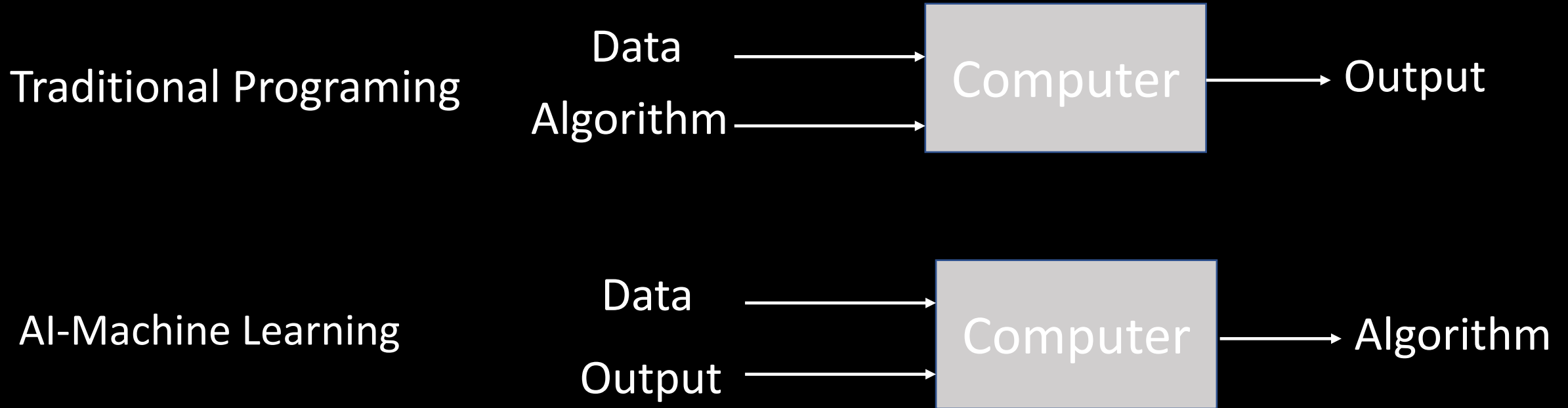
Intelligence demonstrated
by machines

Definitions

- **AI**: Intelligence demonstrated by machines
- **ML**: Set of algorithms that allow computers to learn from (big) data
- **DL**: Set of learning techniques focused on models and neural networks



Why AI, Machine Learning?



ML provides systems the ability to **automatically** learn from **experience** (without being explicitly programmed)

Agenda

- Understanding Artificial Intelligence
- Artificial Intelligence & Python
- Demo

How is AI being used today?

AI is Everywhere

AUTOMATION



Automating actions, processes, and alerts

CONVERSATION



Understanding text and answering questions in natural language

OPTIMIZATION



Analyzing data for patterns and outliers and deriving insights

RECOMMENDING AND INSIGHTS



Understanding needs and recommending solutions

PERSONALIZING



Personalizing experiences

VISUAL RECOGNITION



Recognizing objects in images and videos

<https://www.ibm.com/artificial-intelligence>

IBM makes advanced AI
more accessible for users
everywhere

<https://github.com/IBM/watson-machine-learning-samples/tree/master/cloud/notebooks>

Agenda

- Understanding Artificial Intelligence
- Artificial Intelligence & Python
- Demo

<https://dataplatfom.cloud.ibm.com/>

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SPAM Email Detection



Spam detector

 Mail thinks this message is Junk Mail.

Move to Inbox

☆ MARK ZUCKERBERG

Junk - Google

August 24, 2018 at 10:48 AM

MZ

WINNING AMOUNT

Reply-To: MARK ZUCKERBERG

WINNING AMOUNT

My name is Mark Zuckerberg. A philanthropist the founder and CEO of the social-networking website Facebook, as well as one of the world's youngest billionaires and Chairman of the Mark Zuckerberg Charitable Foundation, One of the largest private foundations in the world. I believe strongly in 'giving while living' I had one idea that never changed in my mind - that you should use your wealth to help people and I have decided to secretly give (\$1,500,000.00) to randomly selected individuals worldwide. On receipt of this email, you should count yourself as the lucky individual. Your email address was chosen online while searching at random. Kindly get back to me at your earliest convenience, so I know your email address is valid. (mzuckerberg2444@gmail.com) Email me Visit the web page to know more about me: https://en.wikipedia.org/wiki/Mark_Zuckerberg/ or you can google me (Mark Zuckerberg)

Regards,
MARK ZUCKERBERG

Spam detector

Mail thinks this message is Junk Mail.

Move to Inbox

☆ MARK ZUCKERBERG

WINNING AMOUNT

Junk - Google

August 24, 2018 at 10:48 AM

MZ

Reply-To: MARK ZUCKERBERG


Email Length: 250 characters
Email punctuation: 6


WINNING AMOUNT


My name is Mark Zuckerberg, A philanthropist the founder and CEO of the social-networking website Facebook, as well as one of the world's youngest billionaires and Chairman of the Mark Zuckerberg Charitable Foundation, One of the largest private foundations in the world. I believe strongly in 'giving while living' I had one idea that never changed in my mind - that you should use your wealth to help people and i have decided to secretly give {\$1,500,000.00} to randomly selected individuals worldwide. On receipt of this email, you should count yourself as the lucky individual. Your email address was chosen online while searching at random. Kindly get back to me at your earliest convenience, so I know your email address is valid. (mzuckerberg2444@gmail.com) Email me Visit the web page to know more about me: https://en.wikipedia.org/wiki/Mark_Zuckerberg/ or you can google me (Mark Zuckerberg)


Regards,
MARK ZUCKERBERG

AutoAI in Watson Studio

 IBM Cloud Pak for Data

All

 Search

Upgrade

Projects / Demo-2021 Launch IDE  [Add to project](#) [Overview](#) [Assets](#) [Environments](#) [Jobs](#) [Access Control](#) [Settings](#) What assets are you looking for?

> Data assets

> AutoAI experiments [New AutoAI experiment](#) 

> Notebooks [New Notebook](#) 

> Deep learning experiments [New Deep learning experiment](#) 

> Models

AutoAI in Watson Studio

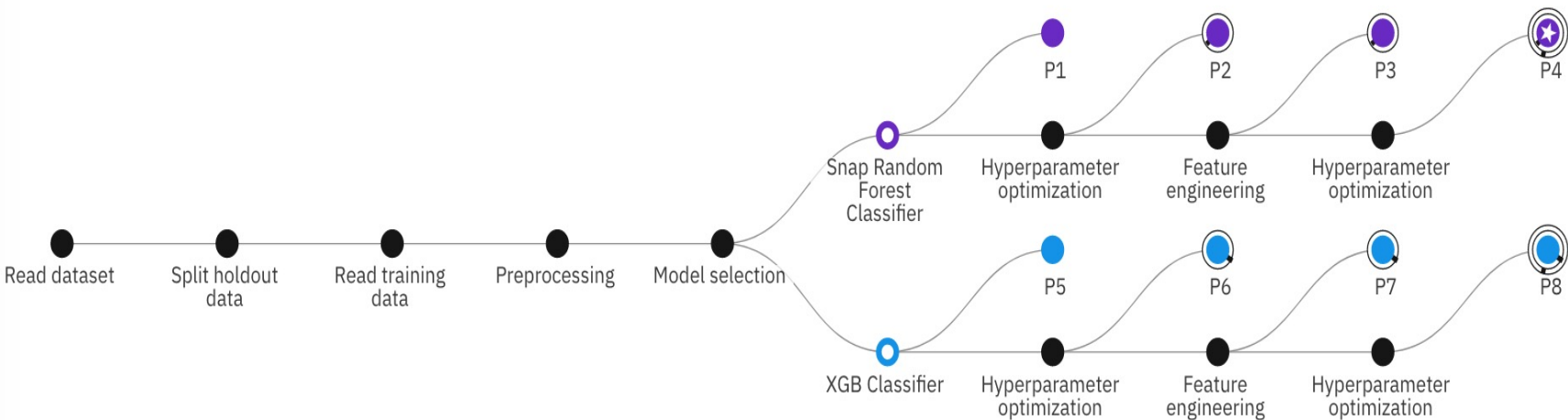
Experiment summary

Pipeline comparison

★ Rank by: Accuracy (Optimized) | Cross validation score ⚙️

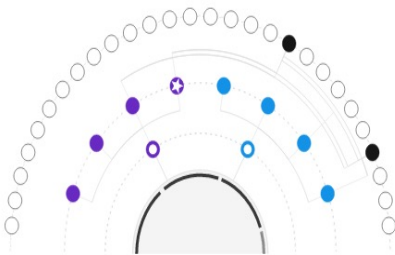
Progress map ⓘ

Prediction column: label



Relationship map

Swap view ↔️



Experiment completed ✓

8 PIPELINES GENERATED

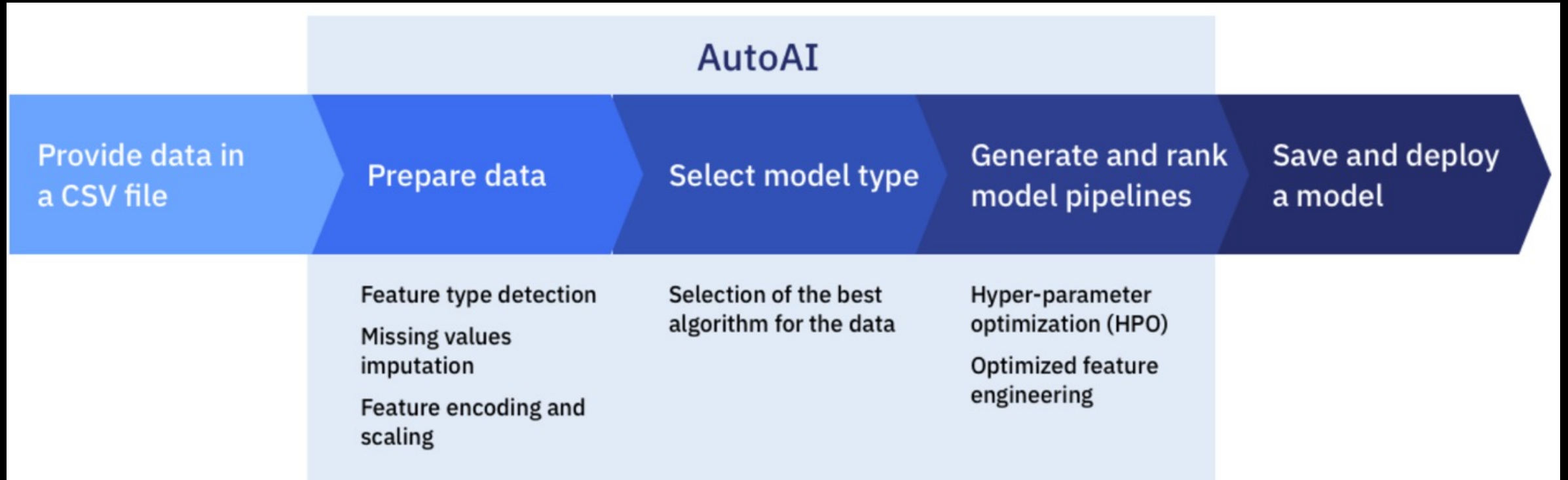
8 pipelines generated from algorithms. See pipeline leaderboard below for more detail.

Time elapsed: 3 minutes

[View log](#)

[Save code](#)

AutoAI in Watson Studio



Q&A

Resources

Cognitive Class for AI

- <https://cognitiveclass.ai/>

Open P-Tech

- <https://www.ptech.org/open-p-tech/>

Open Data Science for All

- <https://github.com/odpi/OpenDS4All>

In the Age of AI | FRONTLINE

- https://www.youtube.com/watch?v=5dZ_lvDgevk

Welcome to The Age of AI. | YouTube

- <https://www.youtube.com/watch?v=5lvQ3fYKnfM>

IBM Data & AI Platform

- <https://dataplatform.cloud.ibm.com/>

Ivan's recent contributions

- <https://github.com/jiportilla/giveback>

Ivan Portilla

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