

A close-up photograph of a person's hands holding a smartphone. The person is wearing a gold watch on their left wrist. The FOX logo is overlaid in large, bold, orange letters across the center of the image.

FOX

#BeEpic!

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Real Artificial Intelligence
for Broadcast and Media

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#BeEpic!

A Software Innovation
Center

Helping medium to
large companies
innovate

Experts in Media

Lean Startup, Agile
Methodologies

Enhanced Time-To-
Market

Transform by doing!

 Akamai

EMC²

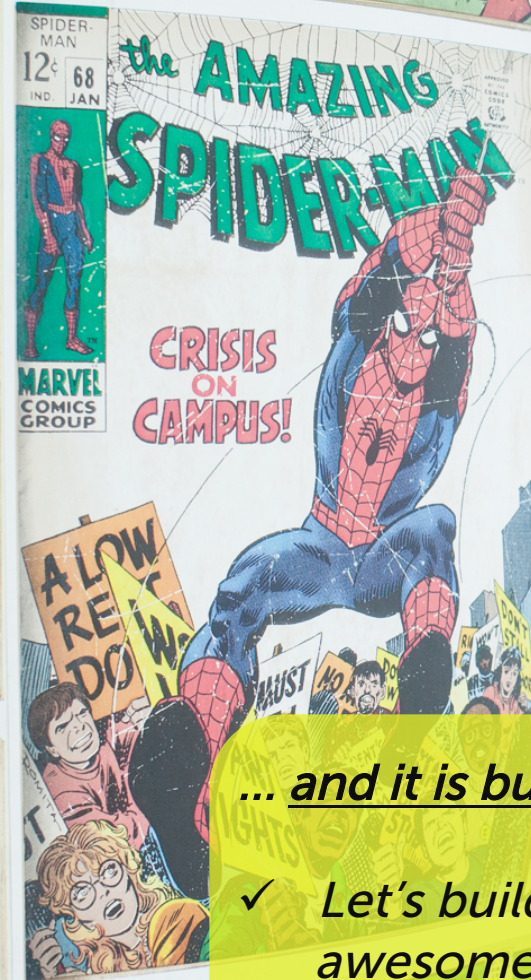
Pivotal™

NOKIA  dash

What do we mean by #BeEpic!

A Team-centric vision...

- ✓ The culture of Creativity
- ✓ Enjoy what you do, and how you do it
- ✓ Grow as a professional, grow as a person
- ✓ Make it sustainable
- ✓ Talent enjoys talent. Talent attracts talent



... and it is built for purpose

- ✓ *Let's build something awesome!, let's make it Epic!*

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Epic Labs on Machine Learning

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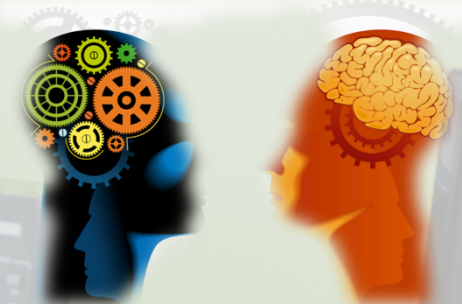
Machine Learning



Deep Learning



Computer vision



Natural Language Processing (NLP)

- Provide a machine the ability to learn
- Create understanding out of pattern recognition
- Allows for awesome use cases for Media & Broadcast!

CHALLENGES & SOLUTIONS EXAMPLES

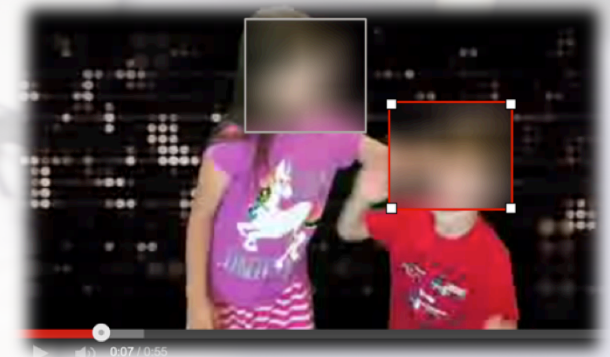
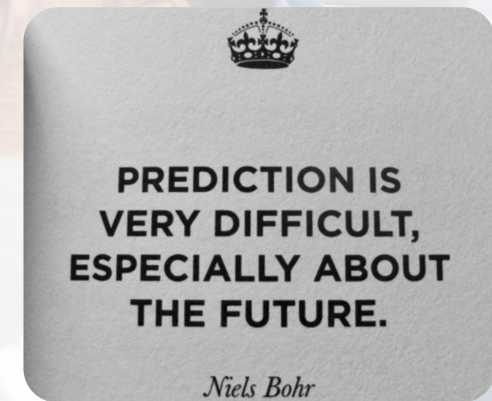
Content Moderation

Fact: In certain countries the unappropriated content may cause serious penalties due to legal restrictions and consequently loss of profit

Need: predict when unappropriated content is about to be broadcasted

Action: SW tool that watch for content triggering alarms to the playout management in order to take actions:

- Mark content as unappropriated (metadata)
- Blur the area in the video
- Edit / Censure the content

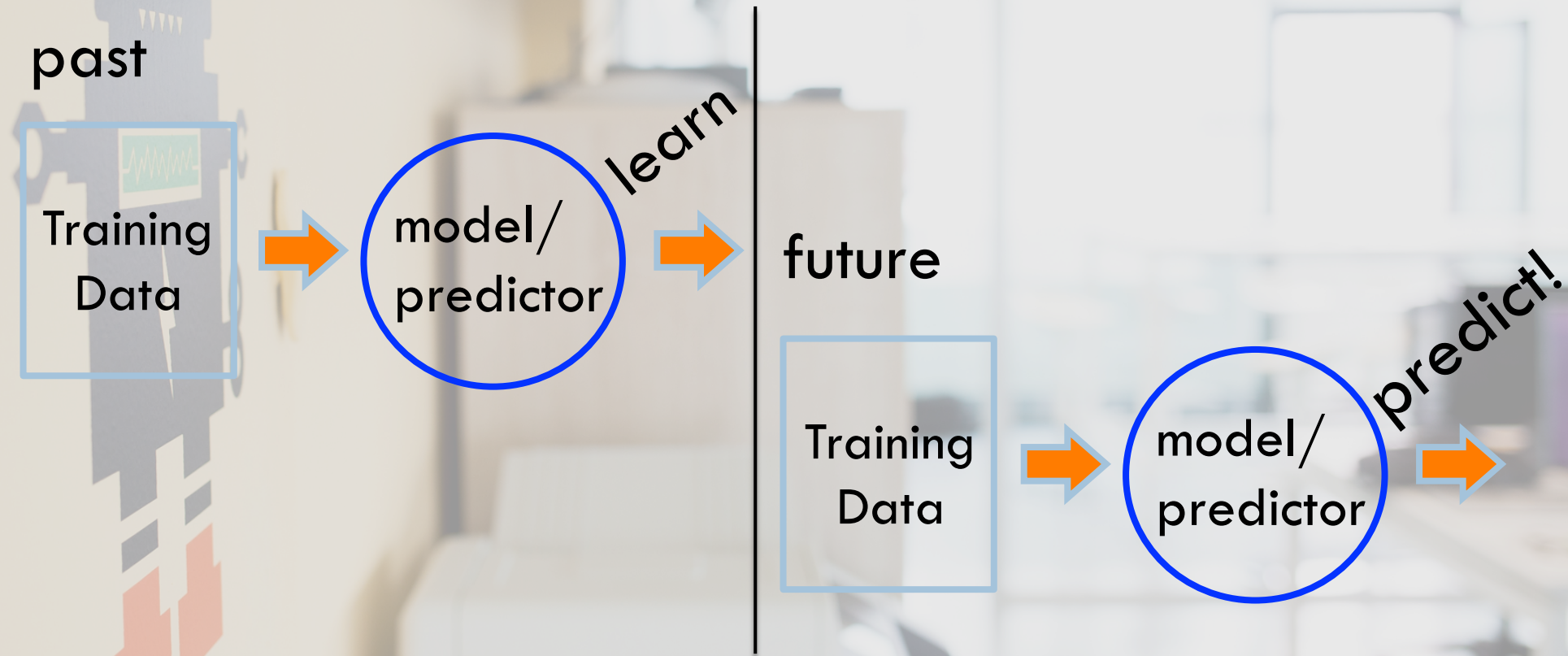


Basics

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Leveraging:
AI
Machine Learning
& Deep learning
techniques

Machine learning is about predicting the future based on the past



"Give computers the ability to learn without being explicitly programmed"

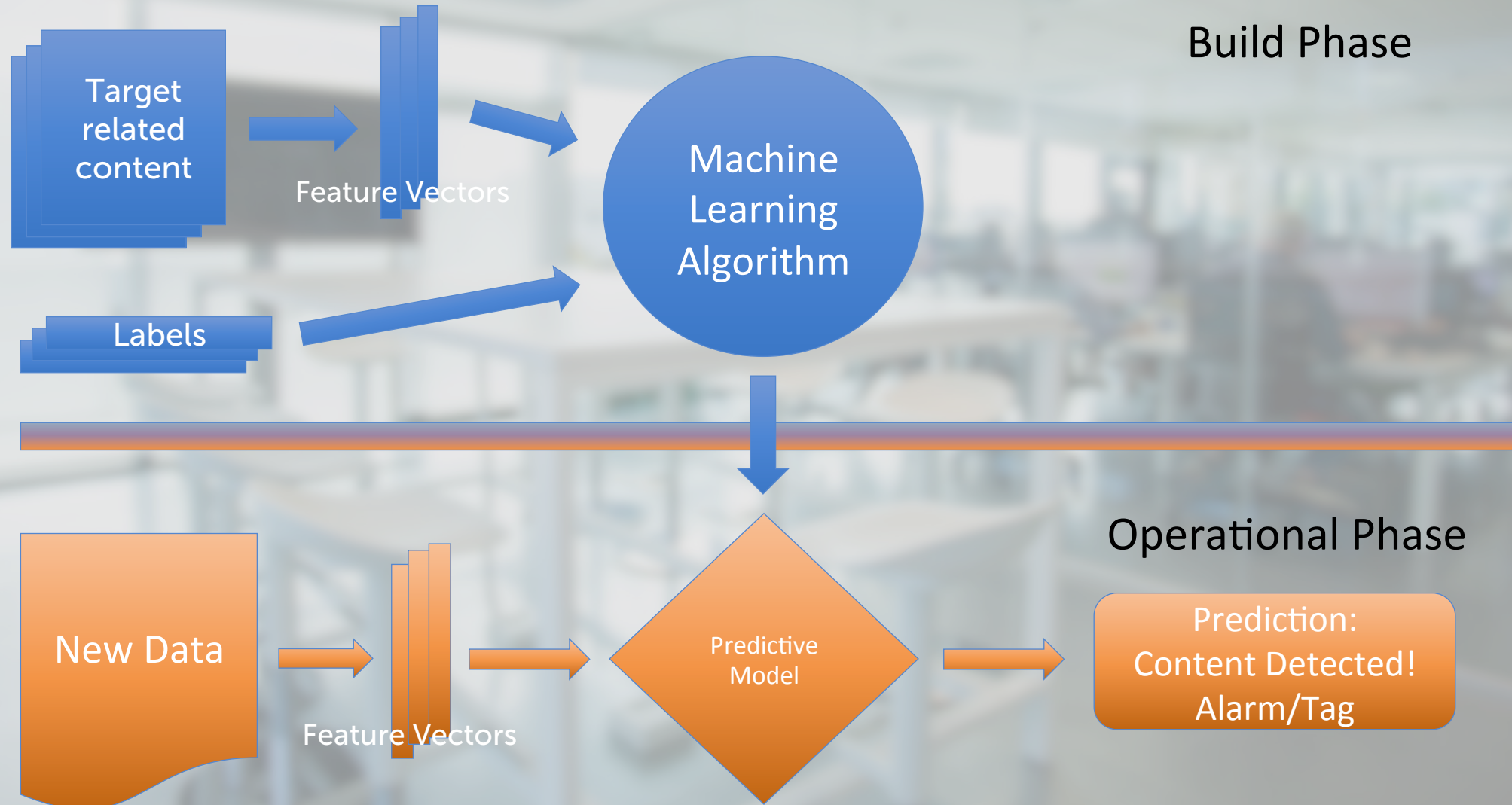
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Machine Learning Media Applications

Workflow

The supervised learning model of detecting smoking content on video

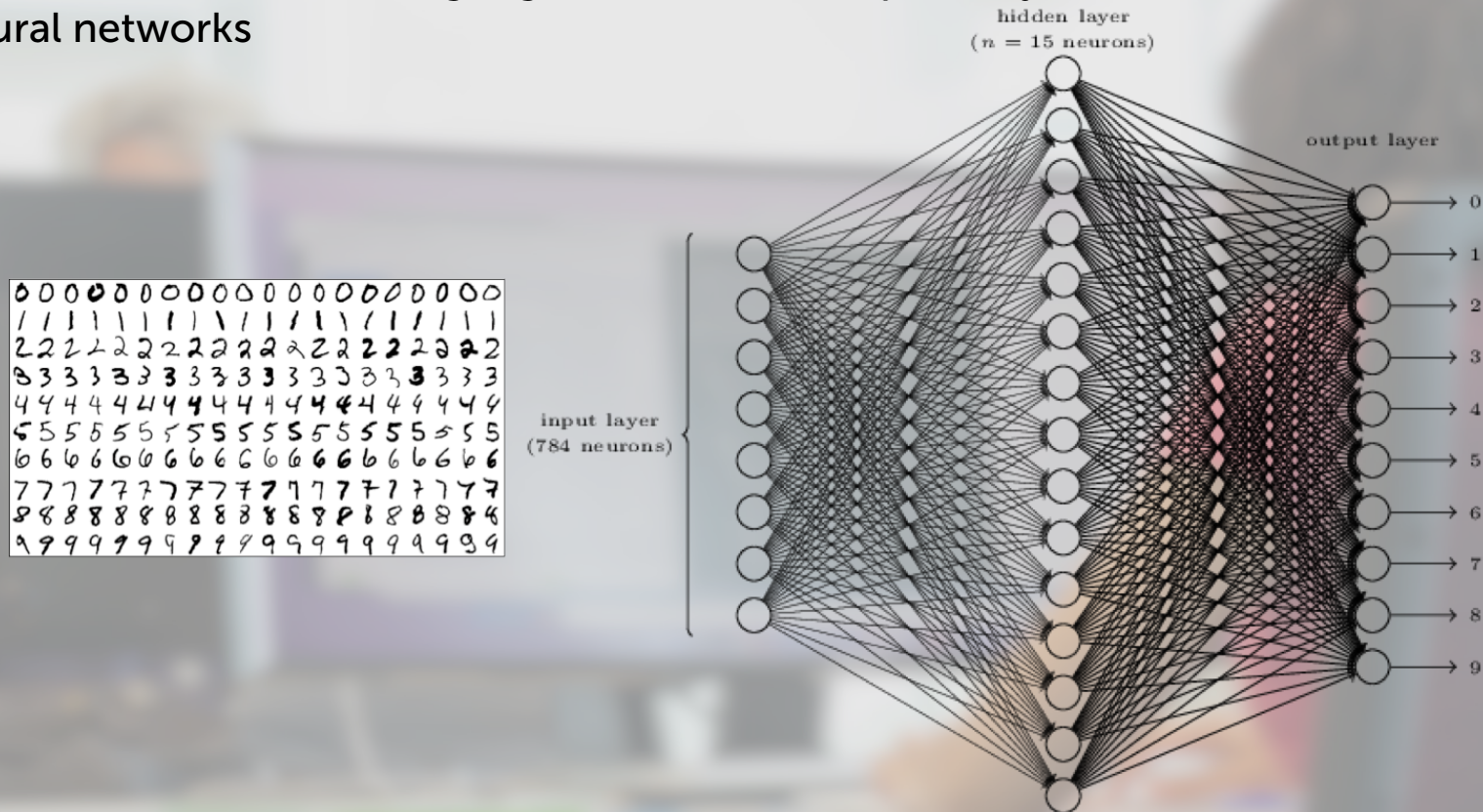




Algorithm Approach

Artificial neural networks

A neural network" (NN), is a learning algorithm that is inspired by the structure and functional aspects of biological neural networks



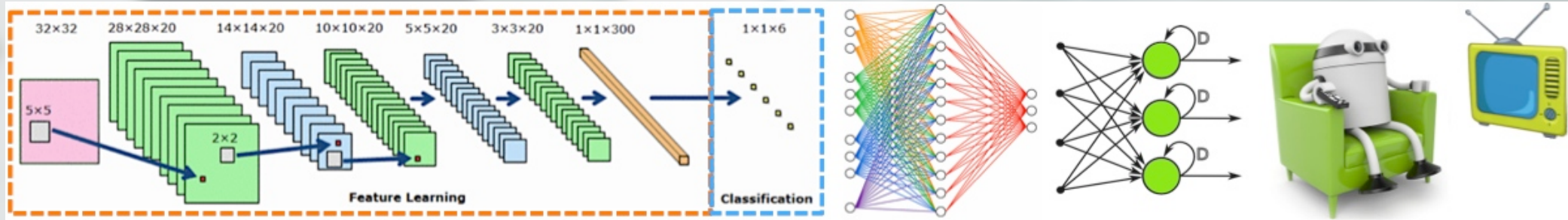
Modern neural networks are non-linear statistical data modeling tools. They are usually used to model complex relationships between inputs and outputs, to find patterns in data, or to capture the statistical structure in an unknown joint probability distribution between observed variables



Machine Learning Media Applications

Computer Vision

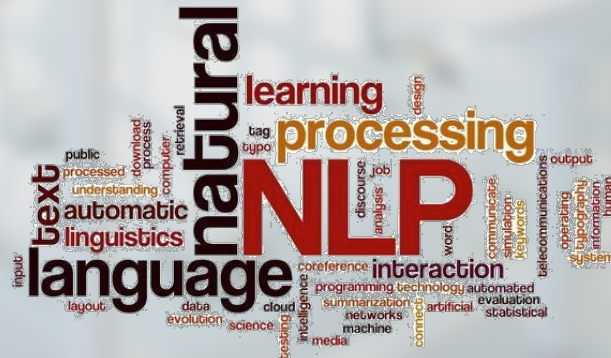
Based on "Deep Learning" we can train a machine that can categorize and identify custom parameters. For this particular application we will train under targeted images as feature learning classification. Here is a diagram on how the workflow of the process runs



Natural Language Processing

A language that has developed naturally in use (as contrasted with an artificial language or computer code).

- Leverage text to enrich language and apply it to media. (i.e.: metadata, search and recommendation engines, etc...)

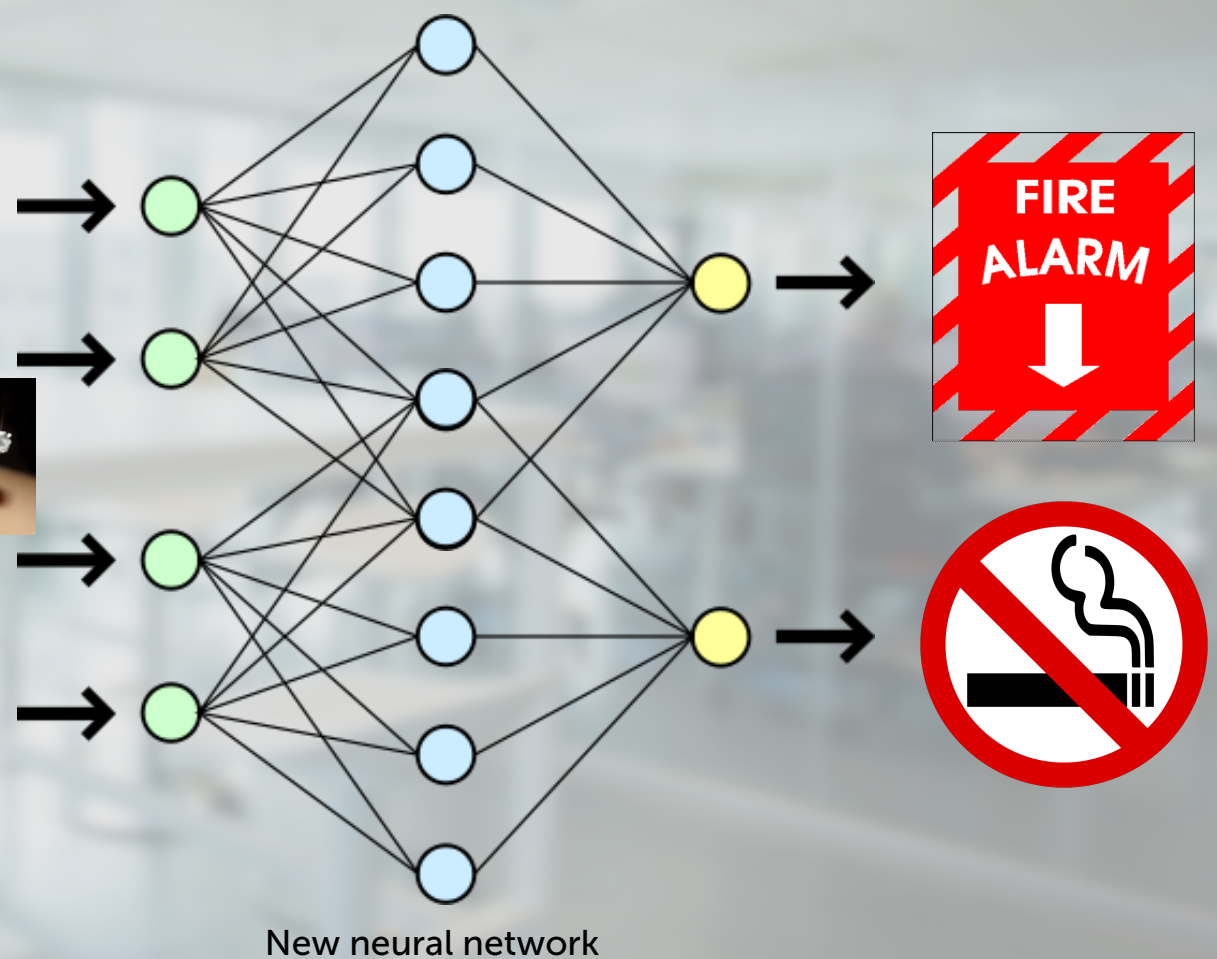
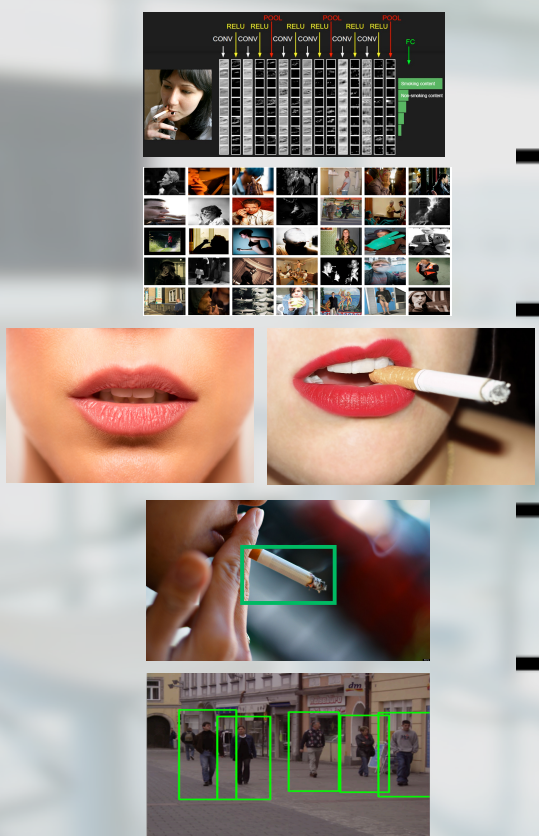
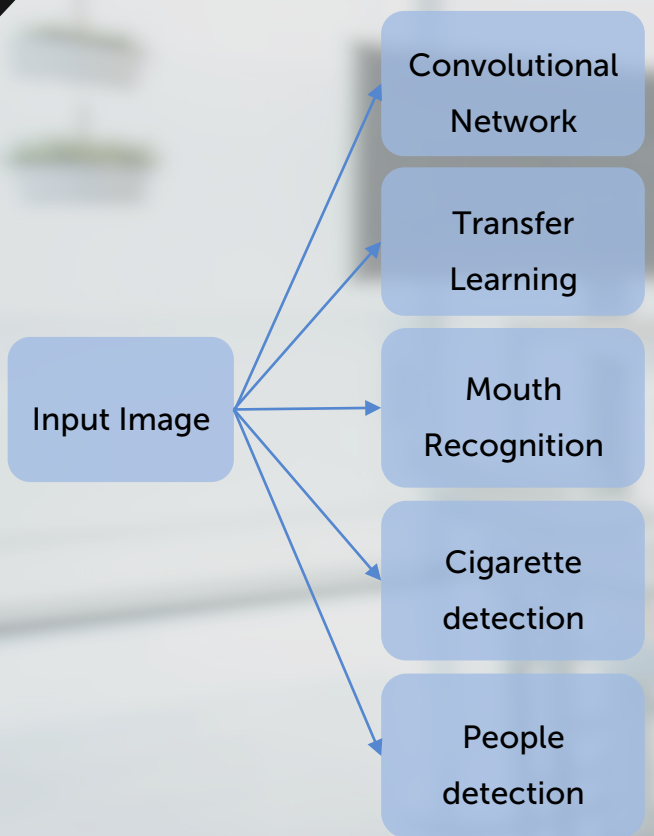




How to get accurate?

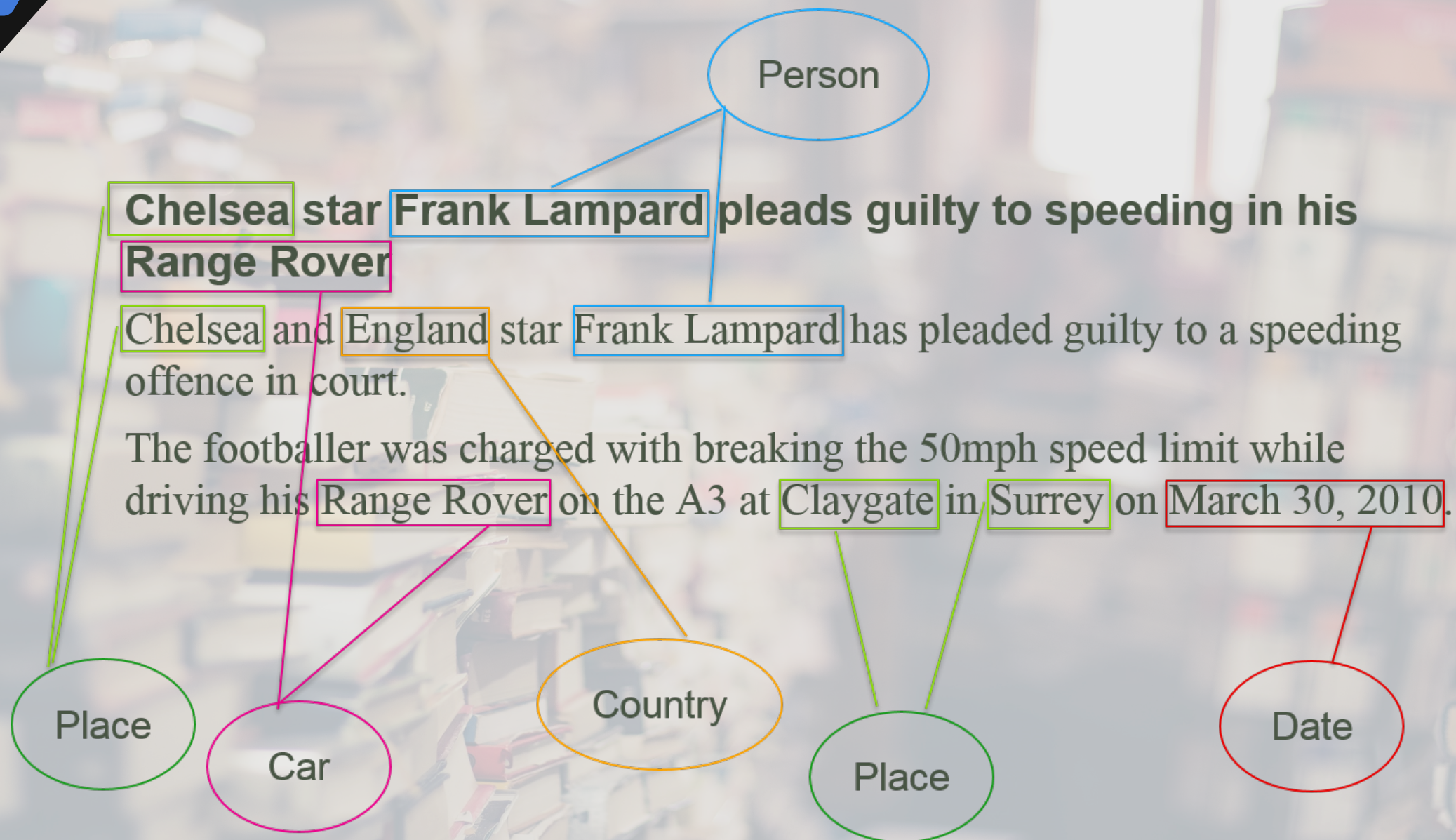
Meta Learning Techniques

We are placing some techniques that will work in parallel:





Example of NLP: adding context





What more is available with AI for media?

Examples

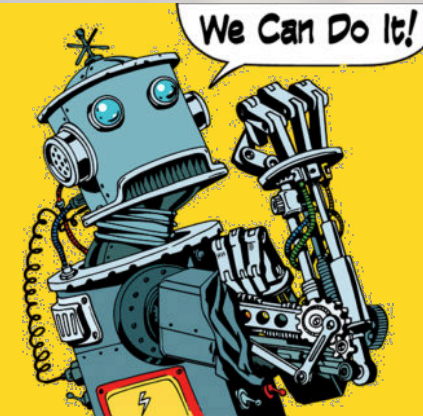
Content moderation:

- For playouts video content
- For live video workflows
- For live and on demand user generated content.



Metadata Enrichment:

- Speech to text, text to speech (accessibility related actions)
- Tagging tools, translation, text recognition
- Recommendation engine leverage



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elefante

caballo

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What more is available with AI for media?

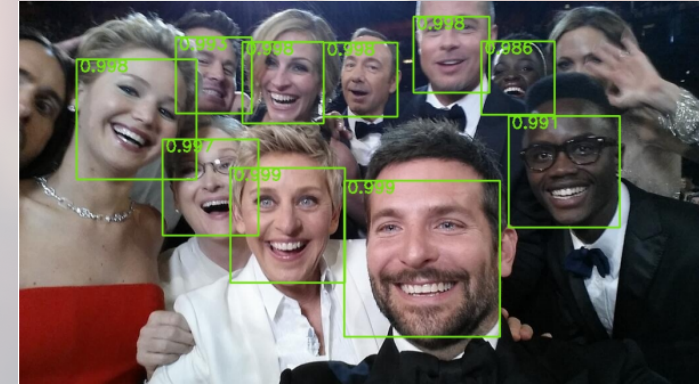
Examples

Advanced video applications:

- Visual text recognition, logos detection, faces detection
- Face identification, objects identification,
- Automated highlight short videos,
- Find relevant more accurately relevant content

Smart Advertising:

- Product placement
- Ad placement
- Content related ad insertion (contextualized)



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Thank you!

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