

WPP

 The European House
Ambrosetti

Il ruolo della comunicazione
per la società di domani

**Innovazione e tecnologia
per comunicare l'Italia di domani**

Giovedì 17 novembre 2022, Officine del Volo, Milano
Dalle ore 9.30 alle ore 12.15

Forum WPP | The European House – Ambrosetti



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**LE TECNOLOGIE DIGITALI E L'INNOVAZIONE AL
SERVIZIO DELLA PERFORMANCE DELLE IMPRESE**

prof. Rita Cucchiara

AIRI, AI Research and Innovation Center

Aimagelab, Università di Modena e Reggio Emilia

New communication capabilities
(5G , public/private networks, V2X..)



New processing capabilities
(cloud, multcloud, from edge to HPC)



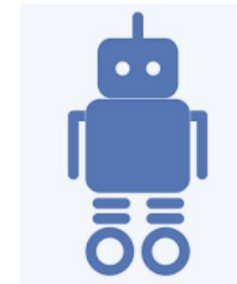
New augmented intelligent capabilities
(AI, Computer vision, NLP for user interfaces)



New data availability
(public and social data, industrial data)



New (semi-)autonomous systems
(AGV, drones, robots, vehicles)



Current advanced Assets
in Digital technologies

Future Assets in Digital technologies*

Expanding Immersive Experiences

- Metaverse **et al.**
- Non-Fungible Tokens
- Decentralized identities
- Digital humans
- ...



Optimizing delivery for digital business

- **Ai-based fintech**
- CyberSec mesh architectures
- **Intelligent doc analysis**
- **Hyper-personalization**
- ...



Accelerate AI automation

- **Causal AI**
- **Foundation models**
- **Generative Design**
- Nocode development
-



Responsible AI

- Ethics by design
- Sustainability
- Lawful (EU regulation)
- Trustworthiness, **Privacy Preserving**
- Agency /Accountability
- Secure AI



* Adapted by Gartner hype trends 2022 and by AI Act 2021-2022

Use case 1 Intelligent Doc Analysis and hyper-personalization Foundation Models

- Few shot learning handwritten style
- Handwritten text recognition
- Intelligent document processing
- Retrieval in digitalized docs

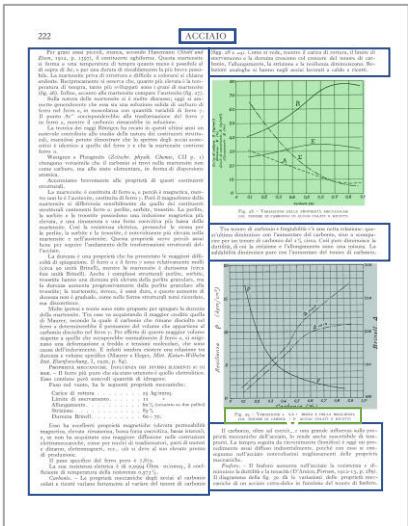
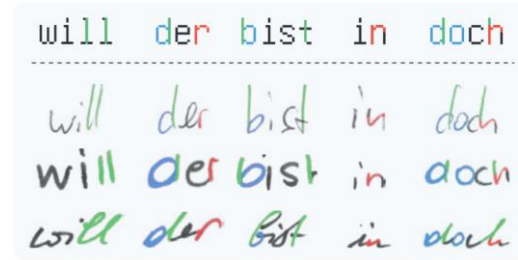
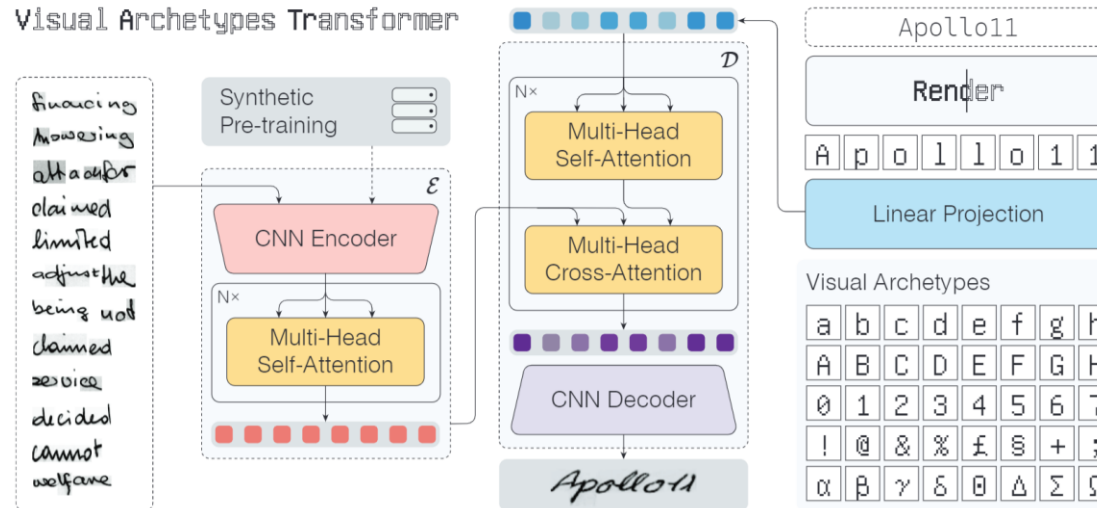


Standard Captioner:
A man is talking on the phone sitting at a desk.
Universal Captioner:
President Obama talking on the phone in the **oval office**.

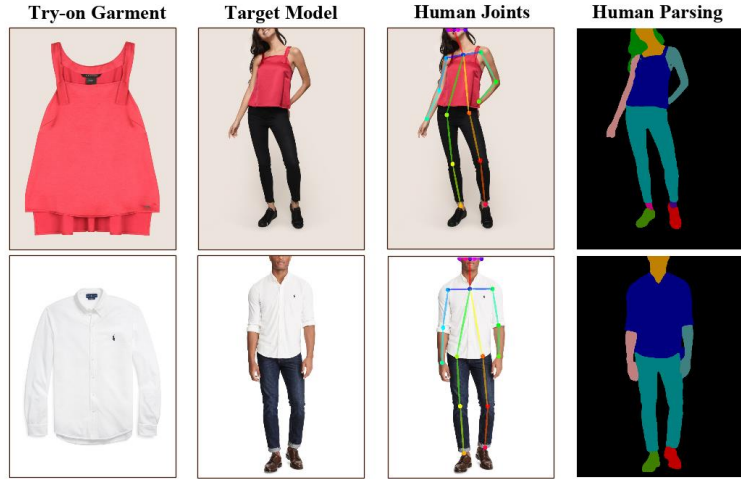


Standard Captioner:
A black car parked in front of a building.
Universal Captioner:
A black **Jaguar** parked in front of a **car dealership**.

Visual Archetypes Transformer



Use case 2 Generative Design



SUPPLIER LABEL IDENTIFICATION
CAF detection

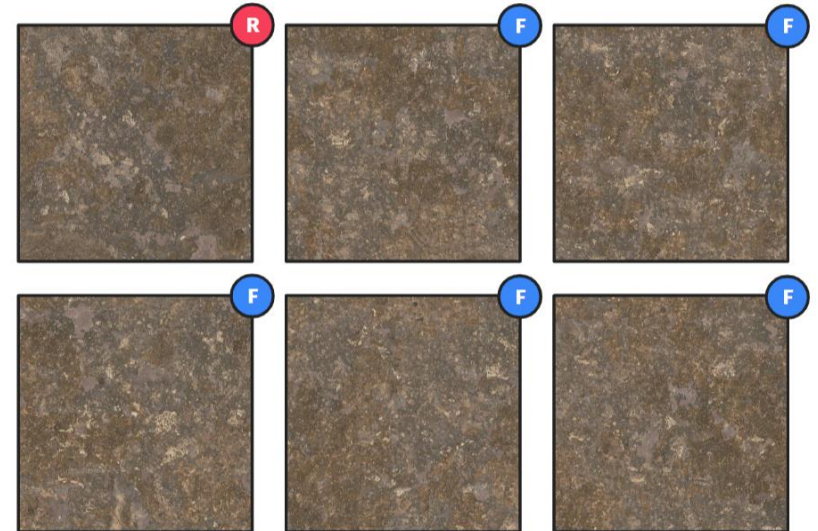
CLASSIFICATION
Long sleeves
Striped
Multicolor
Dress

SIMILARITY

DETECTION

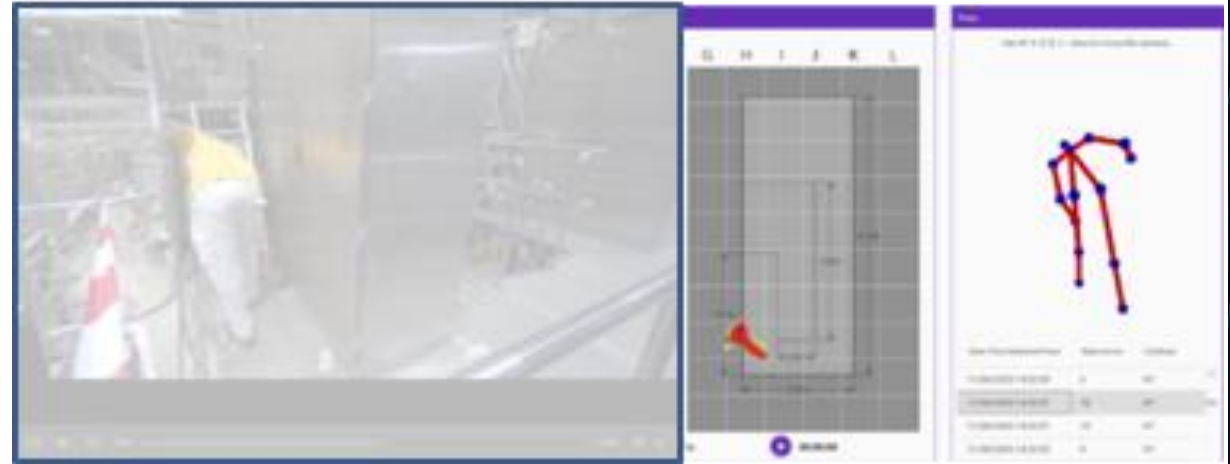
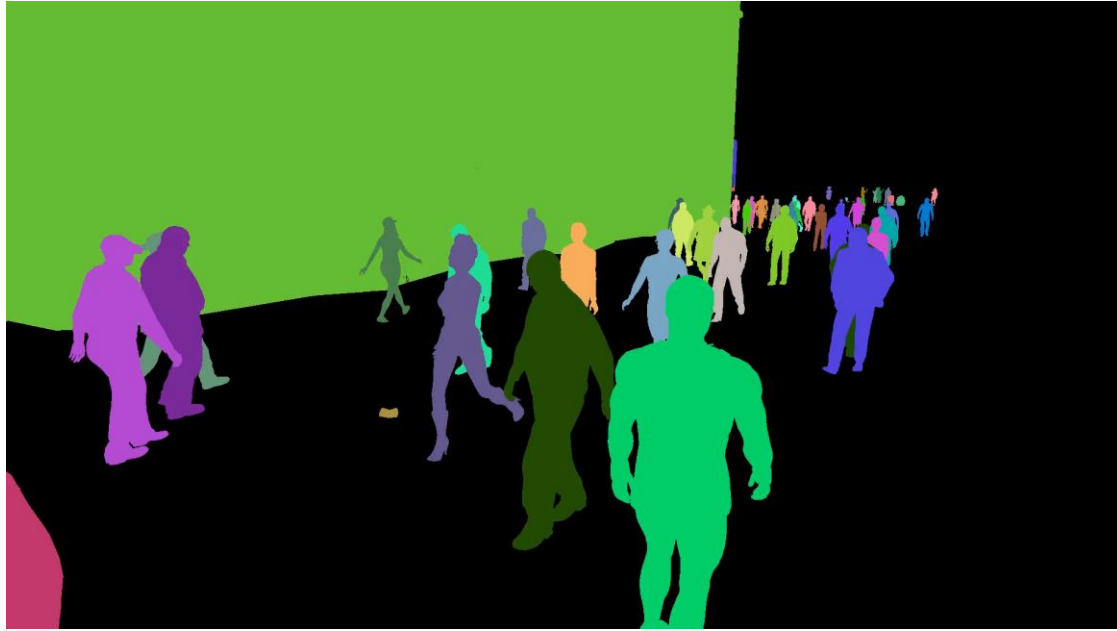
- Bag
- Dress
- Shoes

CAPTIONING
Woman wearing a striped multicolor dress with pink high heel shoes.



Use case 3

Privacy-preserving GDPR-compliant human analysis



AI 11 Italian Priorities



- Industry and Manufactory
- Education systems
- Agrifood
- Culture and Toursim
- Health and Wellness
- Environment, infrastructures
- Banking, finance and insurance
- Public Administration
- Intelligent cities, area and communities
- National security
- Information Technology



Research and innovation

KETs

- advanced manufacturing
- advanced materials
- life-science technologies
- micro/nano-electronics and photonics
- **artificial intelligence**
- security and connectivity



Horizon Europe

How can an industry work with Artificial Intelligence?

Use AI products

- For office (RPA)
- For production and design
- For the whole supply chain
- For logistics, delivery,
- For communication, e-commerce...



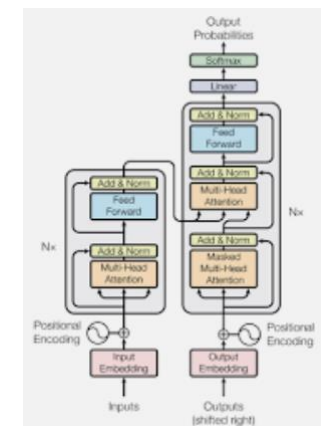
Use APIs

- Open source
- Vendor APIs
- Domain adaptation



Develop your AI

- Design Ai model
- Select architecture
- Knowledge distillation
- Transfer learning
- ...



How can an industry
work with
Artificial Intelligence?

Need of Talents and skills

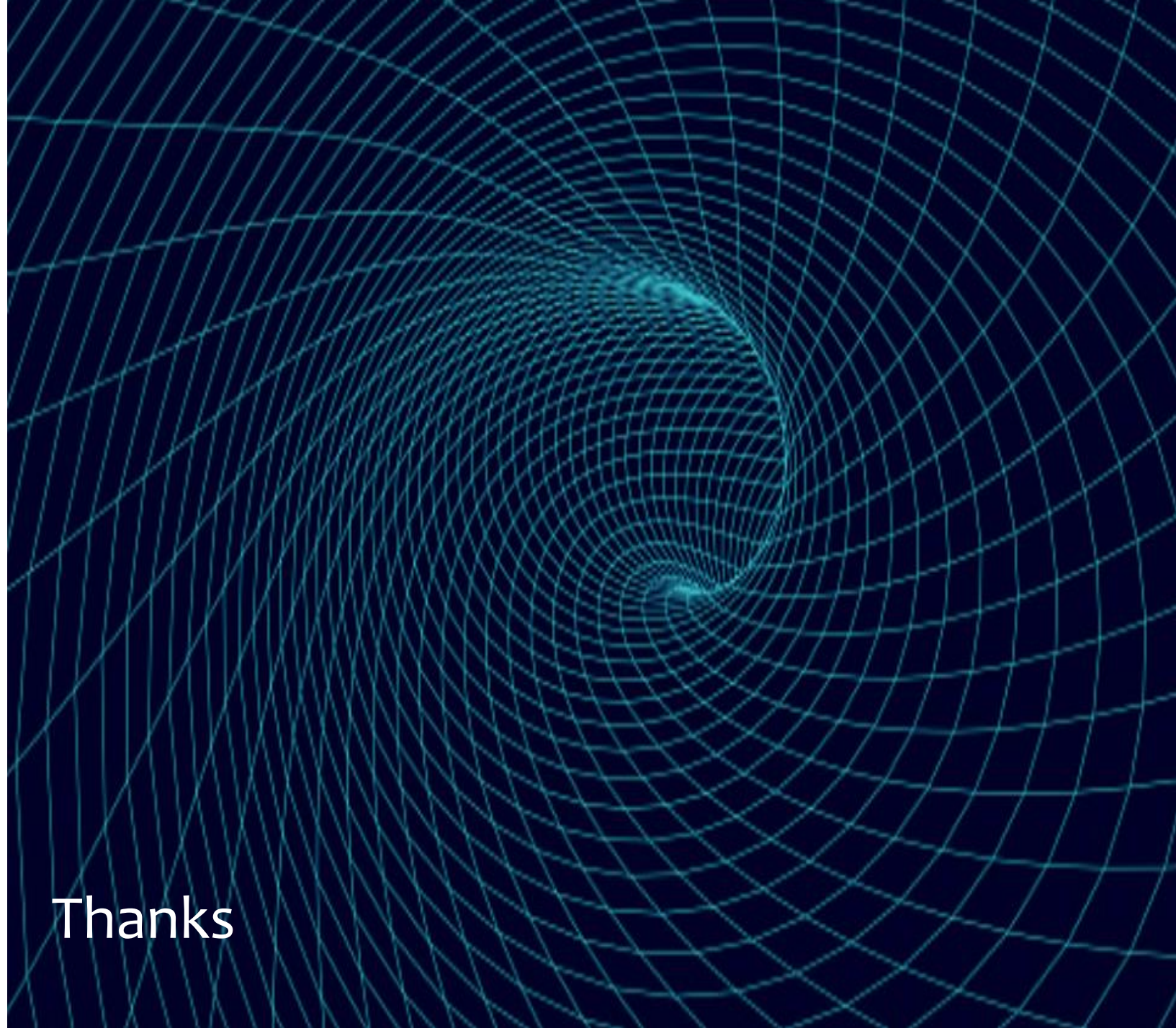


Need of life-long Education



Need of Research





Thanks



AIRI
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UNIMORE
UNIVERSITÀ DEGLI STUDI DI
MODENA E REGGIO EMILIA



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