

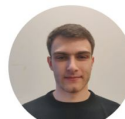
Emanuele Frontoni

InterPARES TRUST AI



From Natural Language Processing
to **Appearance Based** approaches:
challenges and opportunities for
archival science

vrai
vision robotics
artificial
intelligence



UNIVERSITÀ
POLITECNICA
DELLE MARCHE



unIMC
UNIVERSITÀ DI MACERATA

l'umanesimo che innova



Sant'Anna
Scuola Universitaria Superiore Pisa

InterPARES TRUST AI



InterPARES TRUST AI



APPEARANCE & CREATIVITY

COMPUTER VISION & **DEEP LEARNING**

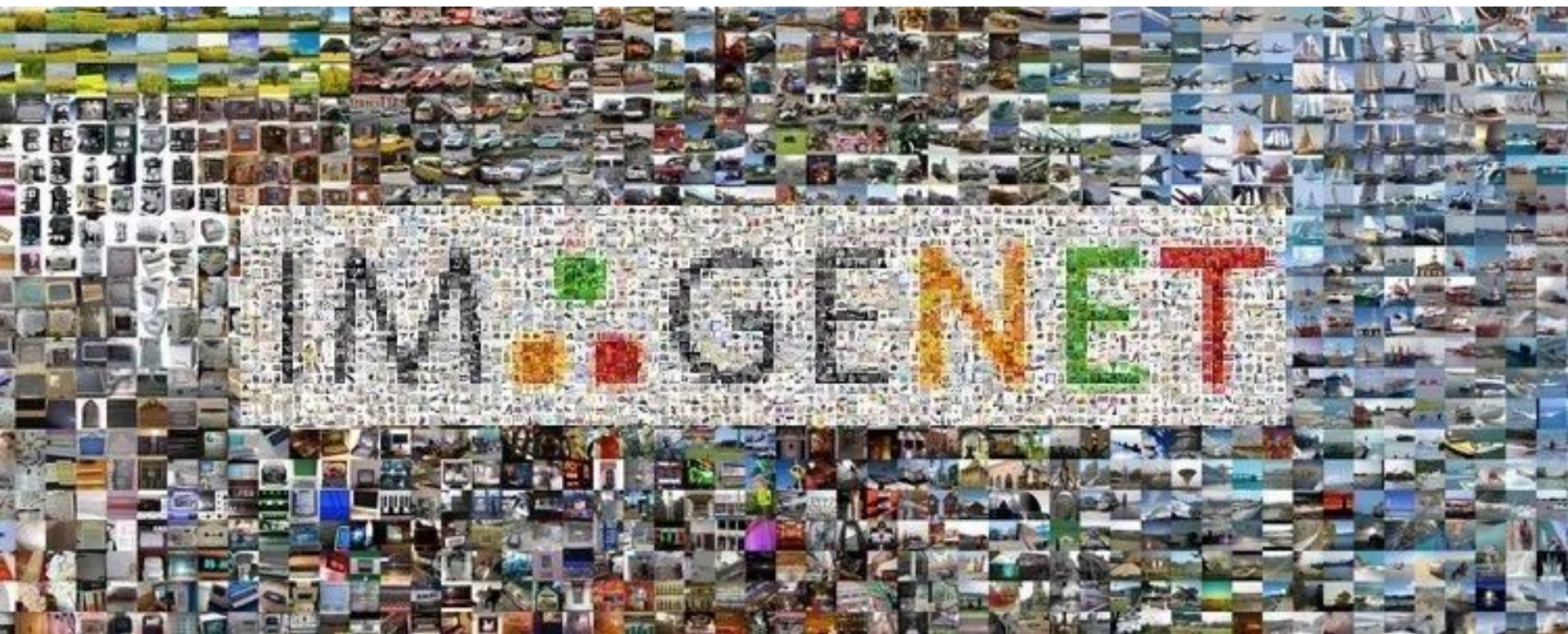




InterPARES TRUST AI



LEARNING FROM EXAMPLES COMPUTER VISION & **DEEP LEARNING**



ImageNet consists of 14,197,122 images organized into 21,841 subcategories.



330K images (>200K labeled) - 1.5 million object instances - 80 object categories



NATIONAL ARCHIVES

[Blogs](#) · [Bookmark/Share](#) · [Contact Us](#)

RESEARCH OUR
RECORDS

VETERANS' SERVICE
RECORDS

EDUCATOR RESOURCES

VISIT US

AMERICA'S FOUNDING
DOCUMENTS

Open Government at the National Archives

[Home](#) > [Open Government](#) > [Available Datasets from the National Archives](#)

Open
Government

[Open Gov Plan](#)
[Developers](#)

[High Value
Datasets](#)

[Archives.gov
Redesign](#)

[Plain Writing](#)

Digital Gov
Strategy

[Implementation
Overview](#)

[Agency
Milestones](#)

[Open Data Policy](#)

Available Datasets from the National Archives

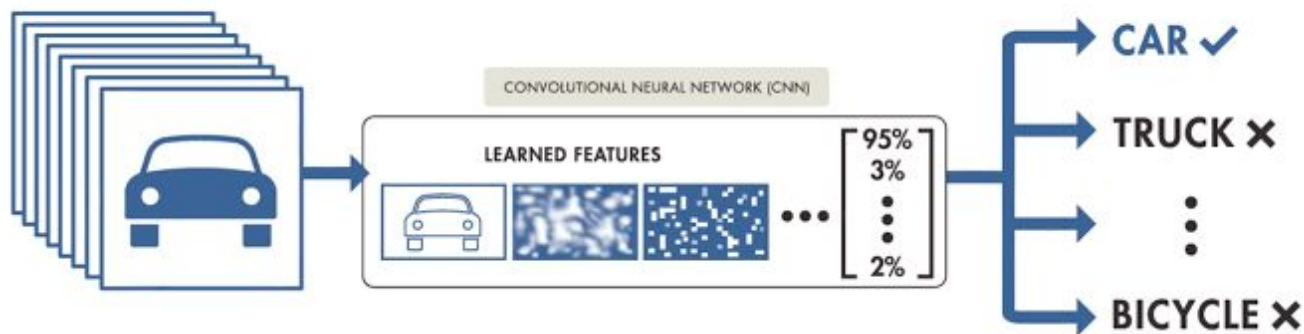
National Archives Datasets

- **National Archives Catalog**
This dataset contains the archival descriptions and authority records from the National Archives Catalog, including the URLs for digital copies of records and data from citizen archivist contributions.
- **1950 Census**
This dataset includes the metadata index, the population schedules and other forms, Indian Reservation Population Schedules, the enumeration district maps, and the enumeration district descriptions for the 1950 Census records.
- **1940 Census**
This dataset contains the the metadata index. the population schedules. the enumeration district

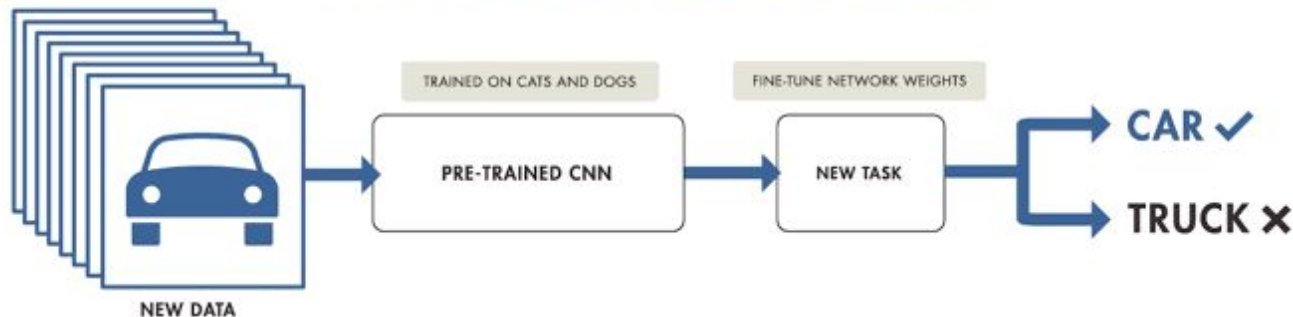
InterPARES TRUST AI

The Multimedia AI Dataset
MISSION

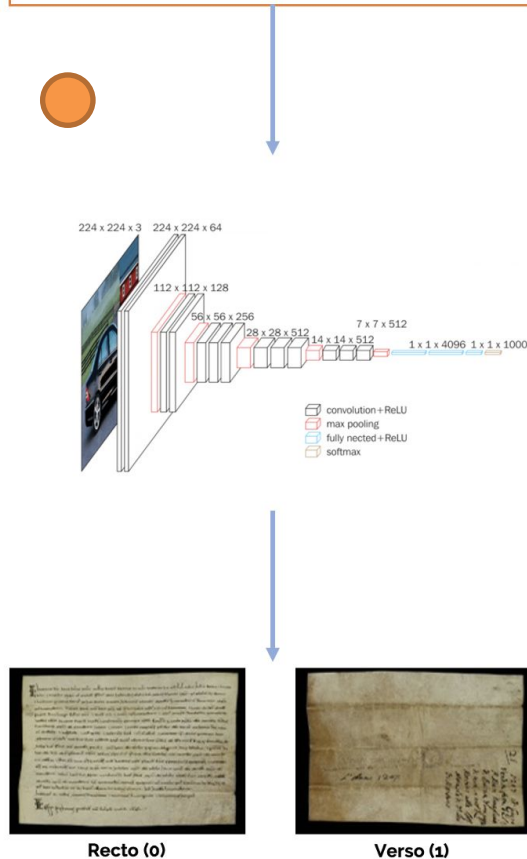
TRAINING FROM SCRATCH



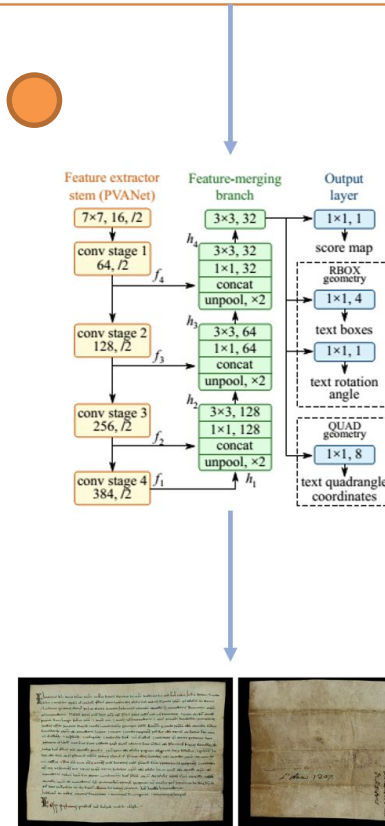
TRANSFER LEARNING



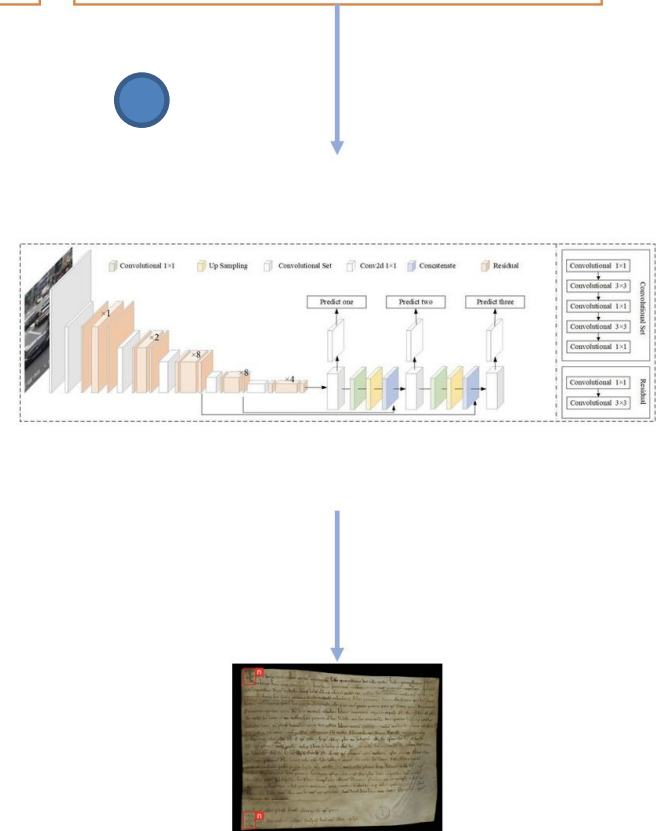
Binary Classification Recto/Verso



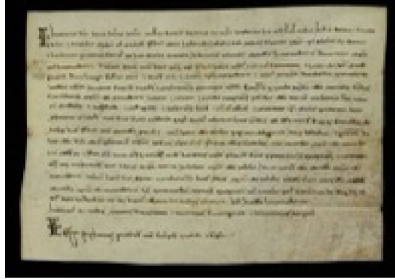
Parchments Text Detection



Signum Tabellionis Detection and Recognition



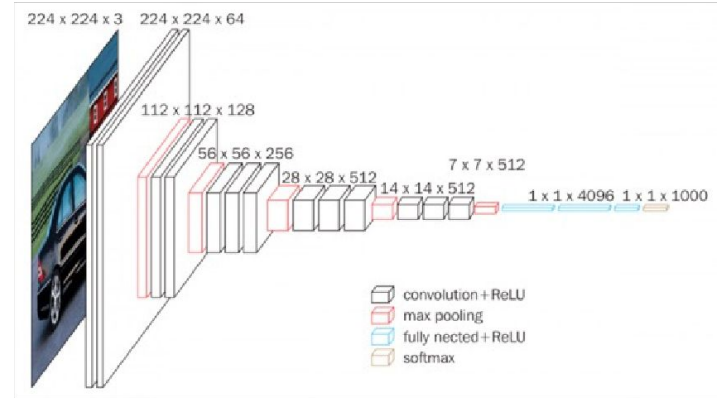
VGG16 DEEP NEURAL NETWORK



Recto

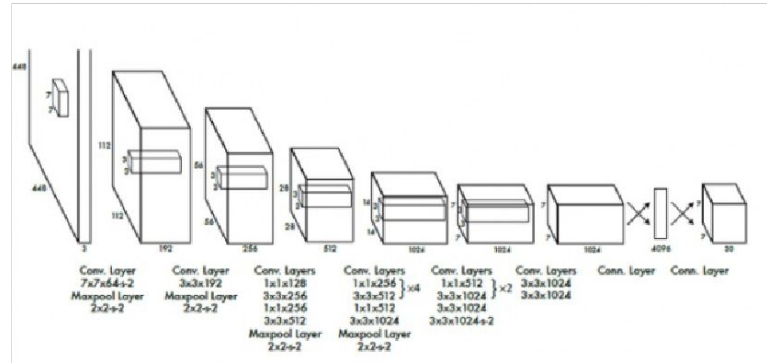
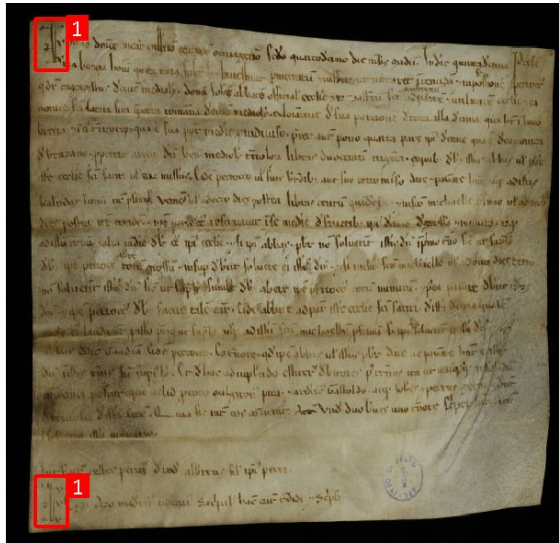


Verso



Simonyan, K., & Zisserman, A. (2014). Very deep convolutional networks for large-scale image recognition. *arXiv preprint arXiv:1409.1556*.

Notarial sign detection



Redmon, J., Divvala, S., Girshick, R., & Farhadi, A. (2016). You only look once: Unified, real-time object detection. In *Proceedings of the IEEE conference on computer vision and pattern recognition* (pp. 779-788).

InterPARES TRUST AI



AI & **PRIVACY**
(PETS)



Ground Truth



Pixelization(8x8)



Pixelization(16x16)



Blur(7x7)



Blur(19x19)



Masking



Ours



No. 134

PATIENT NAME: [REDACTED] DEPENDENT ON: Self

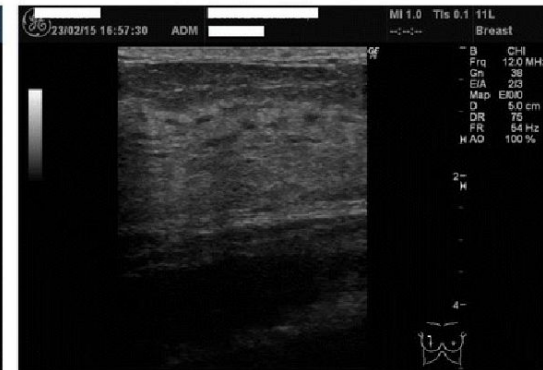
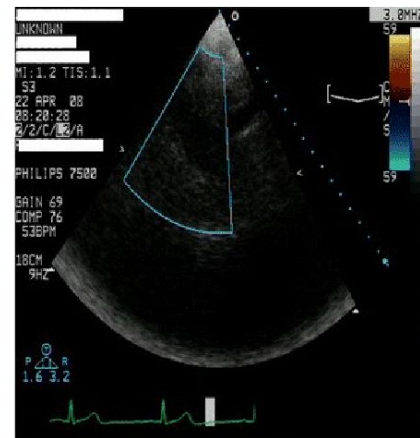
P.F. No. [REDACTED] Designation: D-58 Basic Pay Rs. [REDACTED]

Provisional Diagnosis: Benign Essential Hypertension

Referred to: AIMS, Delhi

A. K. Mehta
24/9/15

Principal Medical Officer/ MO Incharge



InterPARES TRUST AI

The PETS mission based on
APPEARANCE

InterPARES TRUST AI



AI ETHIC

GT: 0 - Pred: 0



GT: 0 - Pred: 0



GT: 0 - Pred: 0



GT: 0 - Pred: 0



GT: 0 - Pred: 0



GT: 0 - Pred: 0



GT: 0 - Pred: 0



GT: 0 - Pred: 0



GT: 0 - Pred: 0



GT: 0 - Pred: 0



GT: 0 - Pred: 0



GT: 0 - Pred: 0



GT: 0 - Pred: 1



GT: 0 - Pred: 0



GT: 0 - Pred: 1



GT: 0 - Pred: 0



GT: 0 - Pred: 0



GT: 0 - Pred: 0



GT: 0 - Pred: 0



GT: 0 - Pred: 1



GT: 0 - Pred: 1



GT: 1 - Pred: 1



GT: 1 - Pred: 1



GT: 1 - Pred: 1



GT: 1 - Pred: 1



GT: 1 - Pred: 1



GT: 1 - Pred: 1



GT: 1 - Pred: 1



GT: 1 - Pred: 1



GT: 1 - Pred: 1



GT: 1 - Pred: 1

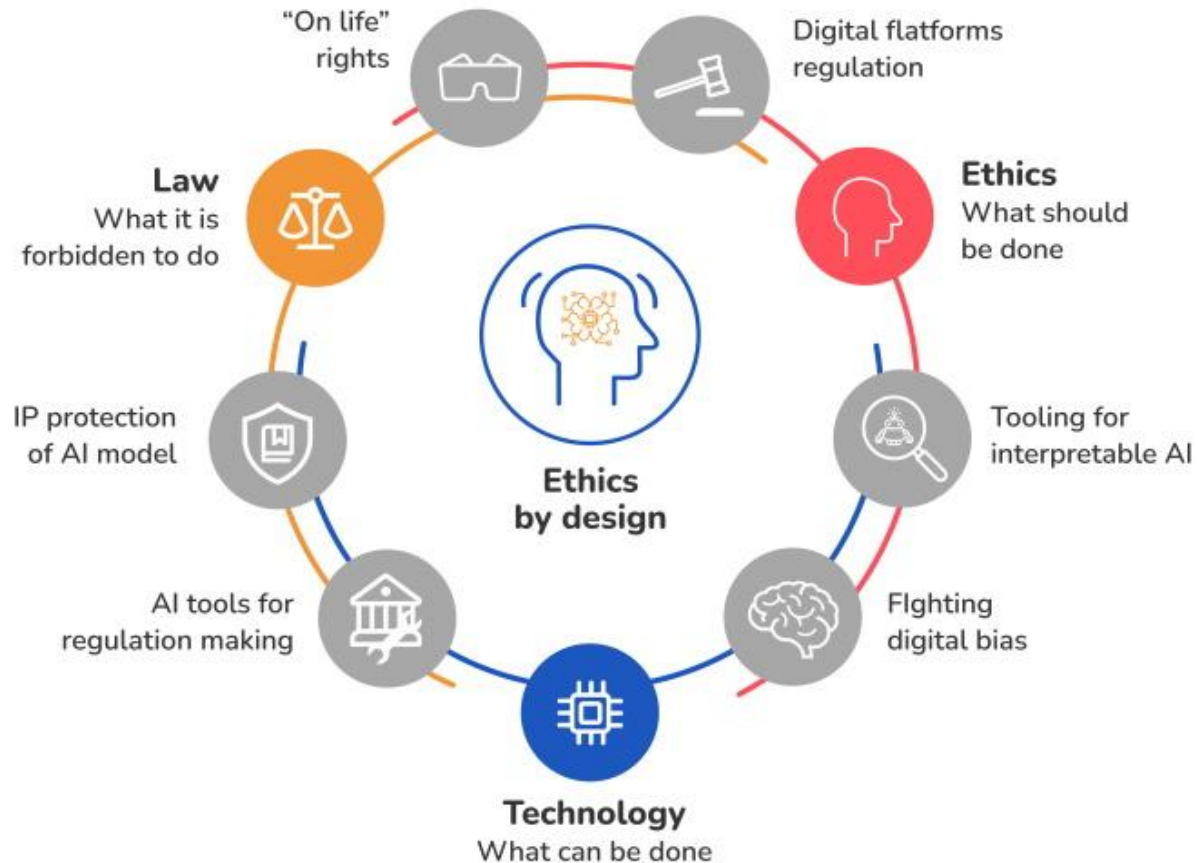


GT: 1 - Pred: 1



InterPARES TRUST AI

The mission of ETHICS
by design



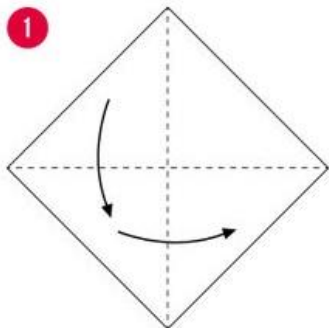
Bias is all of our responsibility!

It reduces the potential of AI for business and society by encouraging mistrust and producing distorted results.

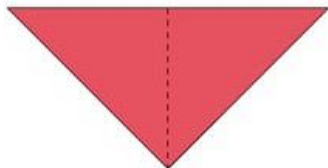
Business and organizational leaders need to ensure that the AI systems they use improve on human decision-making, and they have a responsibility to encourage progress on research and standards that will reduce bias in AI.

AI, BIAS & ERROS TRUST ON HUMANS

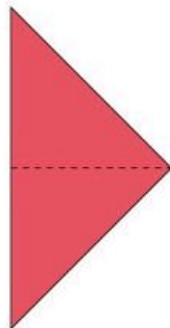
1



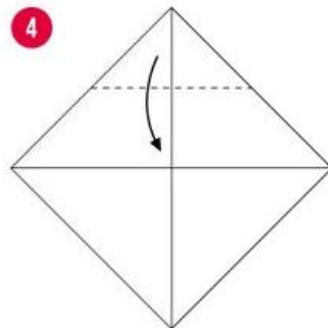
2



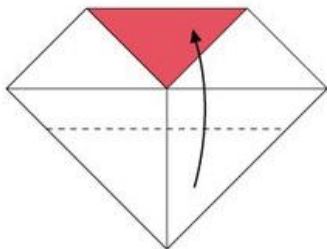
3



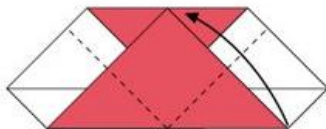
4



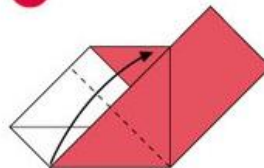
5



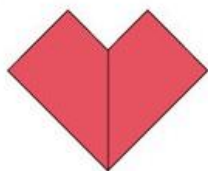
6



7



8



9



10

