



# AI Study Group<sup>+</sup> 2021

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# About Me (Thương, Nguyễn Cảnh)



## Digital Media Lab

Dept. Electrical Computer Engineering  
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Nationality: Vietnamese  
Place of birth: Bac Ninh, Vietnam



- Bachelor Degree in Telecommunication Engineering, 2007-2012
- Hanoi University of Science and Technology, Vietnam
  - 4G/LTE: Channel estimation, MIMO, OFDM
  - Intelligence Transport System: car classification



- Master Degree in Electrical and Computer Engineering, 2012 - 2014
- Doctor Degree in Electrical and Computer Engineering, 2014 - 2019
- Sungkyunkwan University, South Korea
  - Compressive sensing: reconstruction, efficient sampling matrix
  - Image/video compression: video coding standard, light field coding
  - Applications of deep learning



- Postdoctoral researcher, 2019 - 2020
- Osaka University, Osaka, Japan
  - Computational photography: Visual privacy protection
  - Applications of deep learning

OSAKA UNIVERSITY

AI<sup>SG+</sup>  
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- Tencent Media Lab, standard team Since 2020
- Tencent America, Palo Alto, California.
  - Video compression standard
  - AV1, VVC/H.266 and beyond.

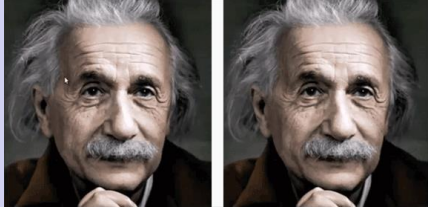
# About “Us”

## Computational Photography

Denoising



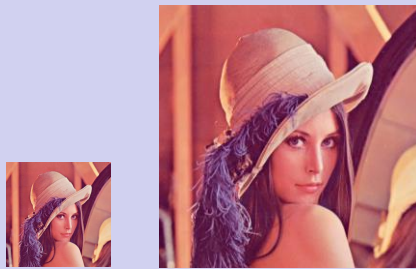
Inpainting



Deblurring



Super-resolution

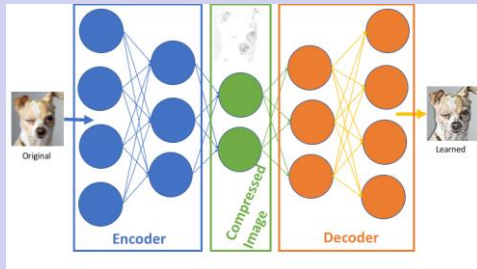


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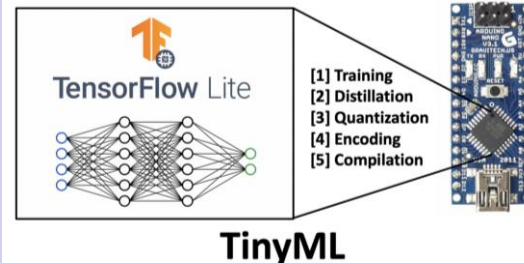
De-weathering



Neural Image Compression

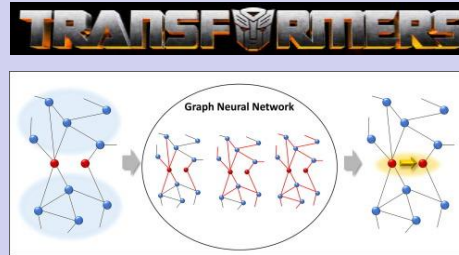


## Low complexity /Efficient/ Real time

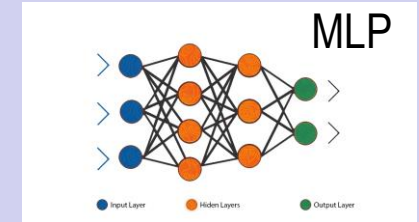


Real time

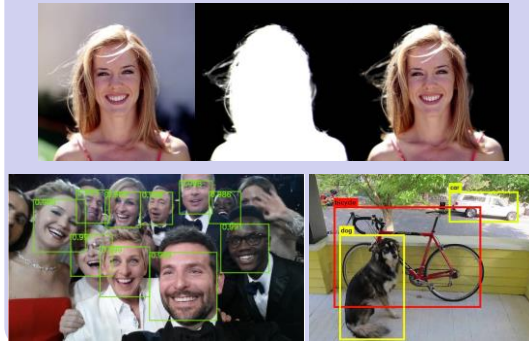
## State-of-the-arts



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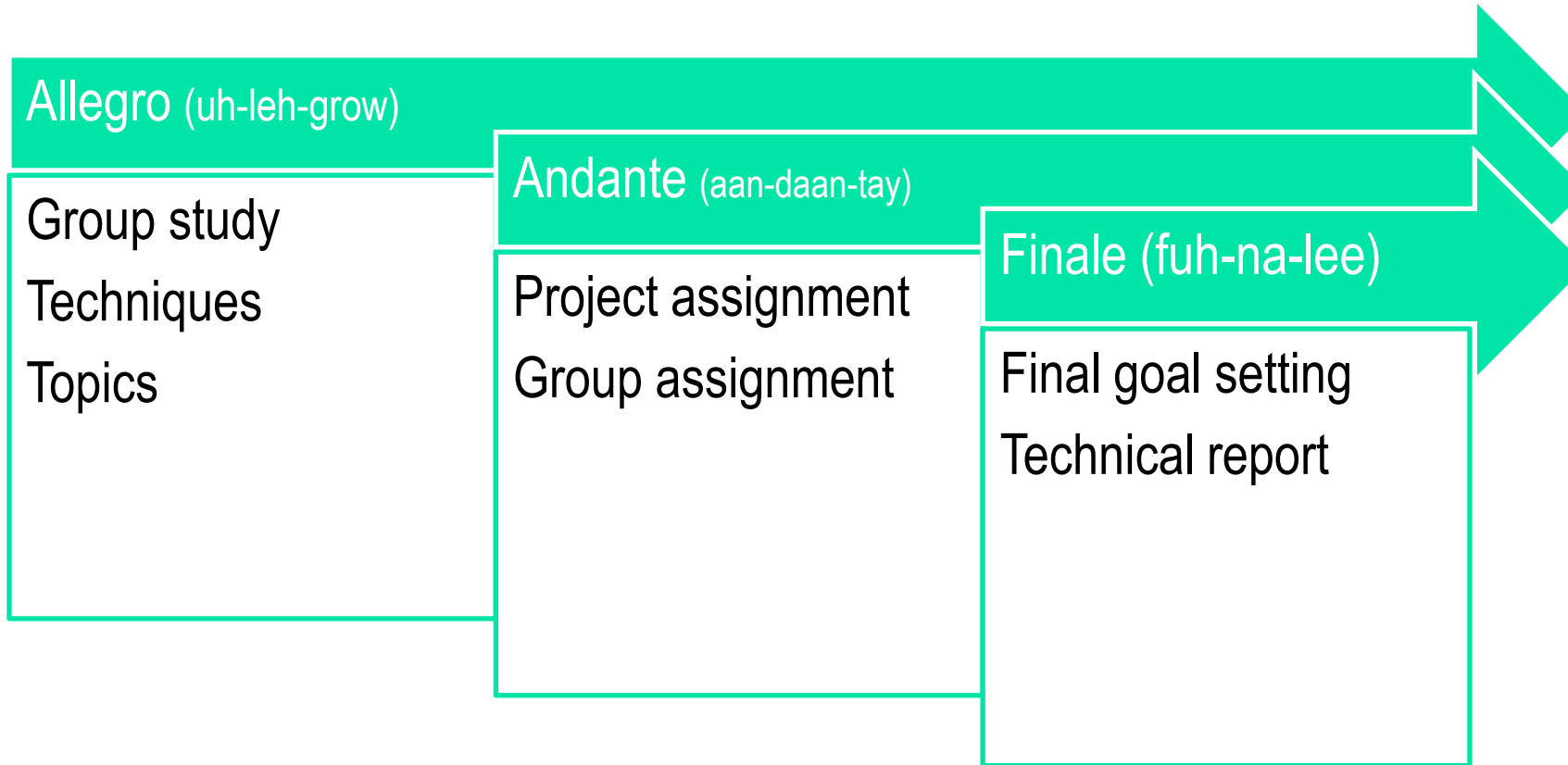
## Applications: visual privacy



- Topics: low level vision, low-complexity, state-of-the-arts, visual privacy

# Schedule?

- Goals: Research paper/ Technical report



# Rules

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- Groups: 2/3 teams
  - Practical vs academic
  - Topic based
  - Technique based
- Attendance rate: 80%
- Questions time:
  - Friday: 18:00 – 23:00 (PDT)

