Deep Learning for Computer Vision

Course Conclusion

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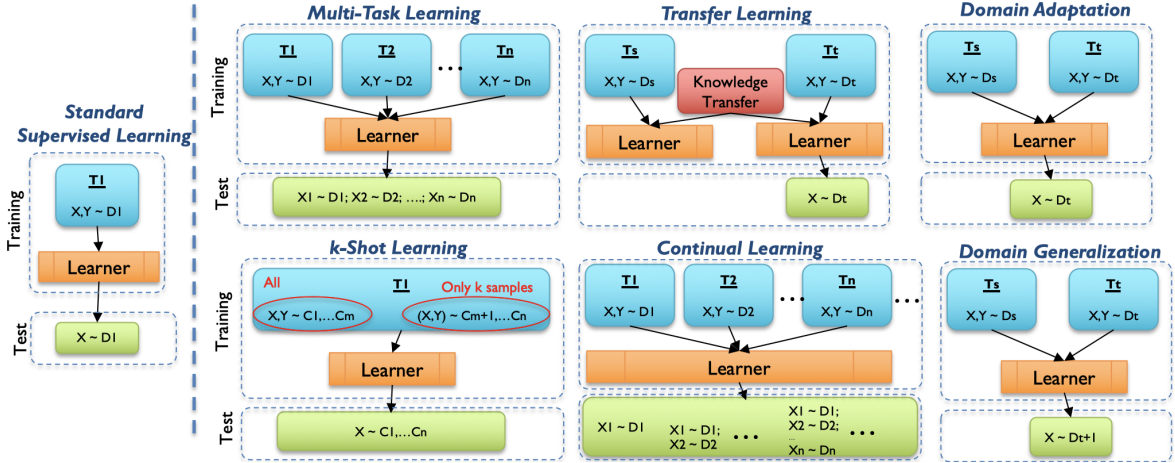
Other Topics: Learning with Limited Supervision



Other Topics: Reinforcement Learning and Vision

- **Reinforcement Learning:** A paradigm of machine learning based where an agent takes actions and interacts with an environment to maximize total, potentially delayed, rewards; usually modeled as a Markov Decision Process (MDP)
- Uses in computer vision?

Other Topics: Reinforcement Learning and Vision

- **Reinforcement Learning:** A paradigm of machine learning based where an agent takes actions and interacts with an environment to maximize total, potentially delayed, rewards; usually modeled as a Markov Decision Process (MDP)
- Uses in computer vision? We already saw **hard attention** and **NAS** - which in turn have many applications!
- Other example use cases:
  - Games
  - Visual servoing
  - Visual tracking

Other Contemporary Topics

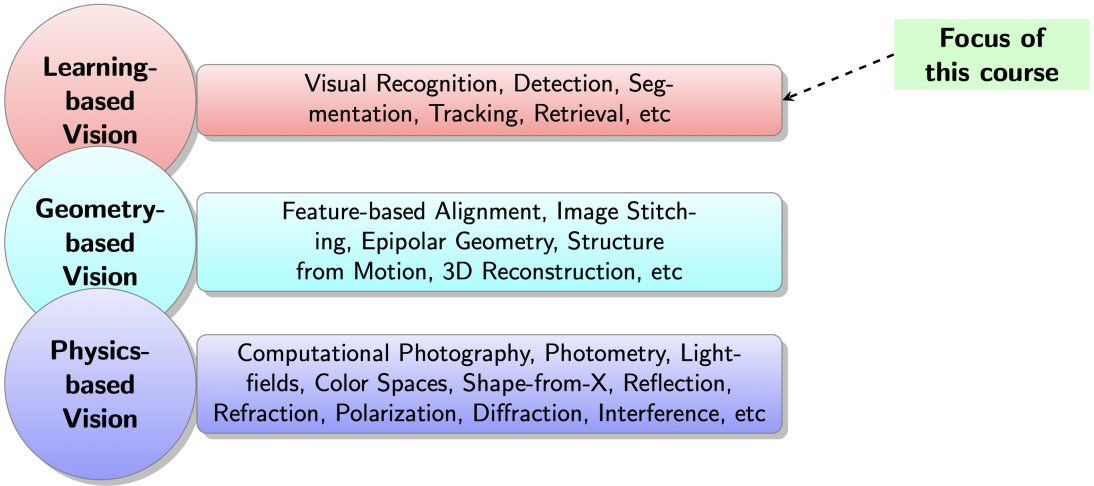
Methods

- Egocentric Vision
- Embodied Vision
- Visual Perception and Robotics
- Visual Tracking
- Hyperspectral Image Analysis
- Computer vision for Augmented/Virtual Reality
- Fair, Explainable and Trusted Computer Vision

Applications

- Vision for Autonomous Navigation
- Vision for Drone Imagery
- Vision for all Seasons: Adverse Weather and Lighting Conditions
- Vision for Healthcare and Biomedical Imaging
- Vision for Agriculture
- Vision for Fashion and Retail
- Vision for Sports

Computer Vision: Topics



Acknowledgements

- We are grateful to the deep learning/computer vision courses and their contents that are publicly available online. Wherever possible and relevant, these sources have been cited. If you notice an oversight, please let us know, and we will be glad to acknowledge.

- Any errors in the material are our own. Please point out such issues, and we will be glad to rectify.

Thank you, and happy learning