Centro interdipartimentale SmartData@PoliTO

Antonio Mastropietro

Politecnico di Torino

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Who I am

Bachelor: University of Pisa "Mathematics" (2015)

M.Sc.: PoliTo "Mathematical Engineering" (2017)

- Thesis in Addfor

Deep Reinforcement Learning (DRL)

→ *Energy Saving* — Saving in a real commercial building = **7%**

→ *Autonomous Driving* — DRL learns to drive in a videogame

Now: High Apprenticeship doctoral student
- Data Scientist in Addfor
– PoliTo Phd "Pure and Applied Mathematics"

Research interests

Develop DRL:

→ *Energy Saving*: Thesis in DENERG about thermostat controllers

→ *Autonomous driving*: DRL in a realistic simulator

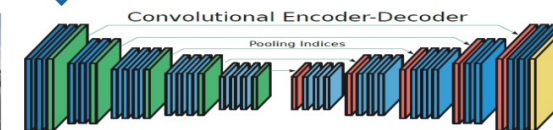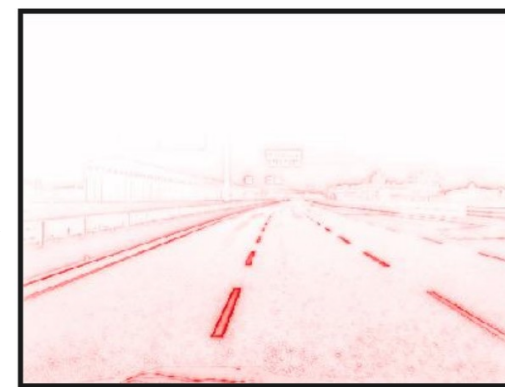Long-term: Integrate Topological Data Analysis in DRL

Improve CNNs for Segmentation using synthetic images:

How to generate the synthetic images?

(1) "Opening the CNN black box": Thesis in UniTo

(2) Compare synthetic VS real images
    "from the CNN point of view".

        From GAN's Discriminator
        to   SyntheticVSReal Discriminator

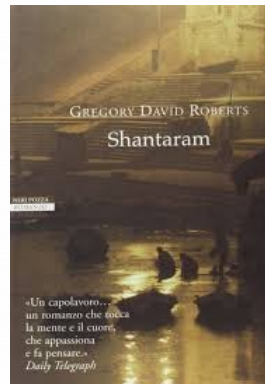Convolutional Encoder-Decoder
Pooling Indices

My hobbies beyond research

Cars

Board-games

Reading

Cycling

**Thanks for
your attention!**