wintics

AI solutions for smart cities

1

Wintics at a glance

Our Mission

We build a more sustainable life together thanks to AI.

We make cities more adaptive to get them more sustainable, more comfortable and healthier for people.

Wintics

Our Approach

Wintics leverages Deep Learning capabilities to quantify cities by automatically analyzing raw videos (thermal and optical) and turning them into insightful data.

2

Urban computer vision market

Some quick indicators

1 million camera installed in public areas in France.

Huge potential to turn this rich but under-exploited data into actionable insights for urban players.

Wintics

Main use cases

Urban planning analysis

Optimized city operations

- mobility
- security
- etc

Place de la Nation, Paris

Free flow highway

Wintics

Example of Wintics' credentials

(both thermal and optical videos)

- Count vehicles by type
- Origin > Destination matrix
- Count vehicle's axles
- License Plate Recognition
- Identify anomalies

Urban scene (thermal video)

Urban scene (optical video)

Wintics

New emerging use case

- Action recognition
- Video captioning
- Video Q&A
- Multi-camera video treatment

Multi-camera video treatment

Action recognition

Wintics

3

Technical challenges

Algorithm's accuracy

Challenges:

- Images quality
- Weather conditions
- Brightness
- Traffic flow volume

Poor quality optical image

Poor quality thermal image

Wintics

Hardware configuration

Challenges:

- Real-time vs differed time analysis
- CPU vs GPU
- Edge vs Cloud vs Centralized computing

Wintics

4

Potential solutions

Algorithmic approaches

Classical Machine Learning

- Image substraction
- Hand-crafted features + Classifier + Sliding Window
- Discriminative Correlation Filters

VS

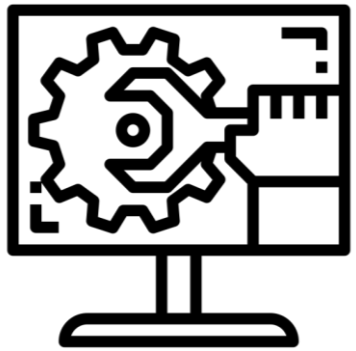
Deep Learning

- Tracking by Detection
- Deep Metrics
- Siamese Networks
- 3D-Convolutions
- RNNs

Engineering

Design metrics

Build



Optimize

Validate

Wintics

5

Conclusion

Takeaways

DATA

More and more video data available (mostly under-exploited)

IMPACT

First impactful use cases are already live

TRENDS

More computing power
&
More efficient algorithms

USE CASE

Exciting perspectives for new use cases

Wintics

Our solution in action

Wintics

Thank you for
your attention

—

Any questions ?

Wintics