Making Machine Data Actionable with Deep Learning

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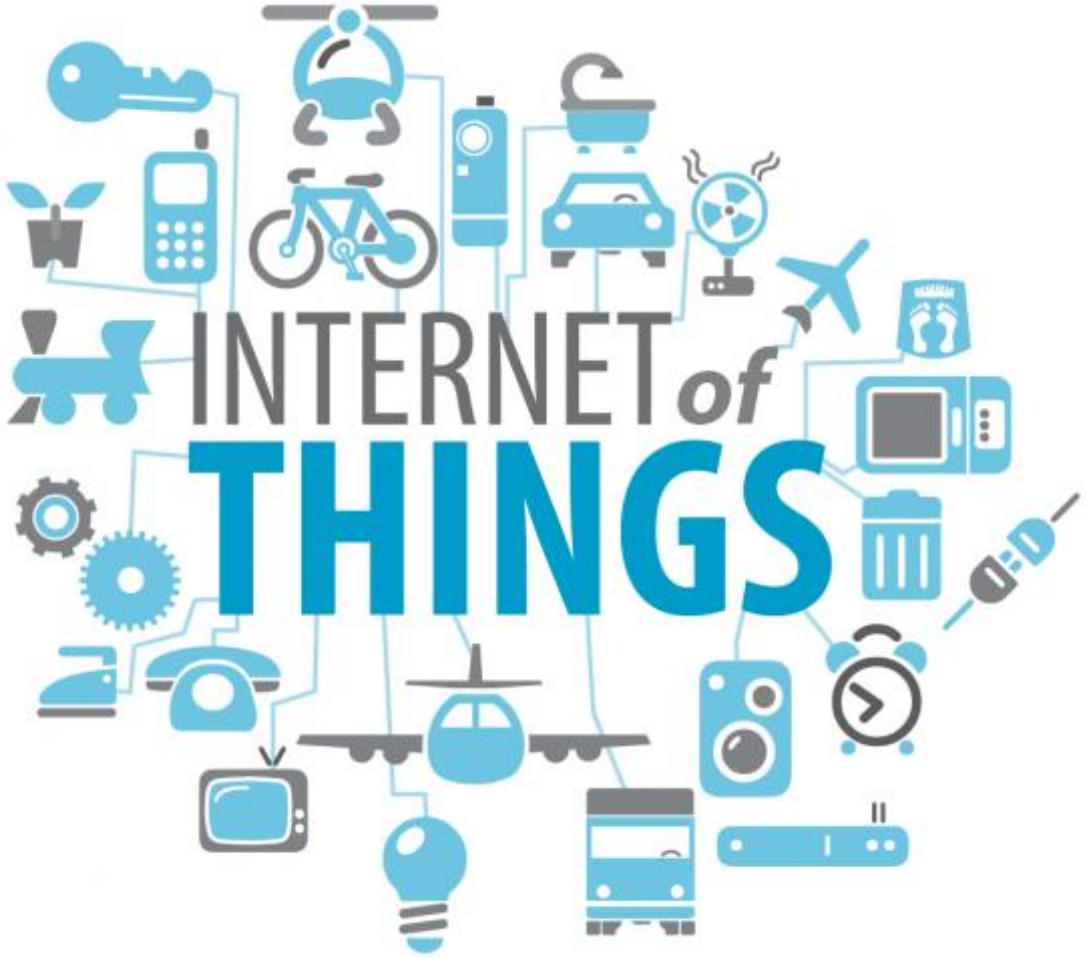
ORACLE

Everything is connected



50 billion
connected devices
by 2020

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More and more video and photo devices

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Most use cases are around monitoring

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A picture is worth a thousand words!

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Deep Learning

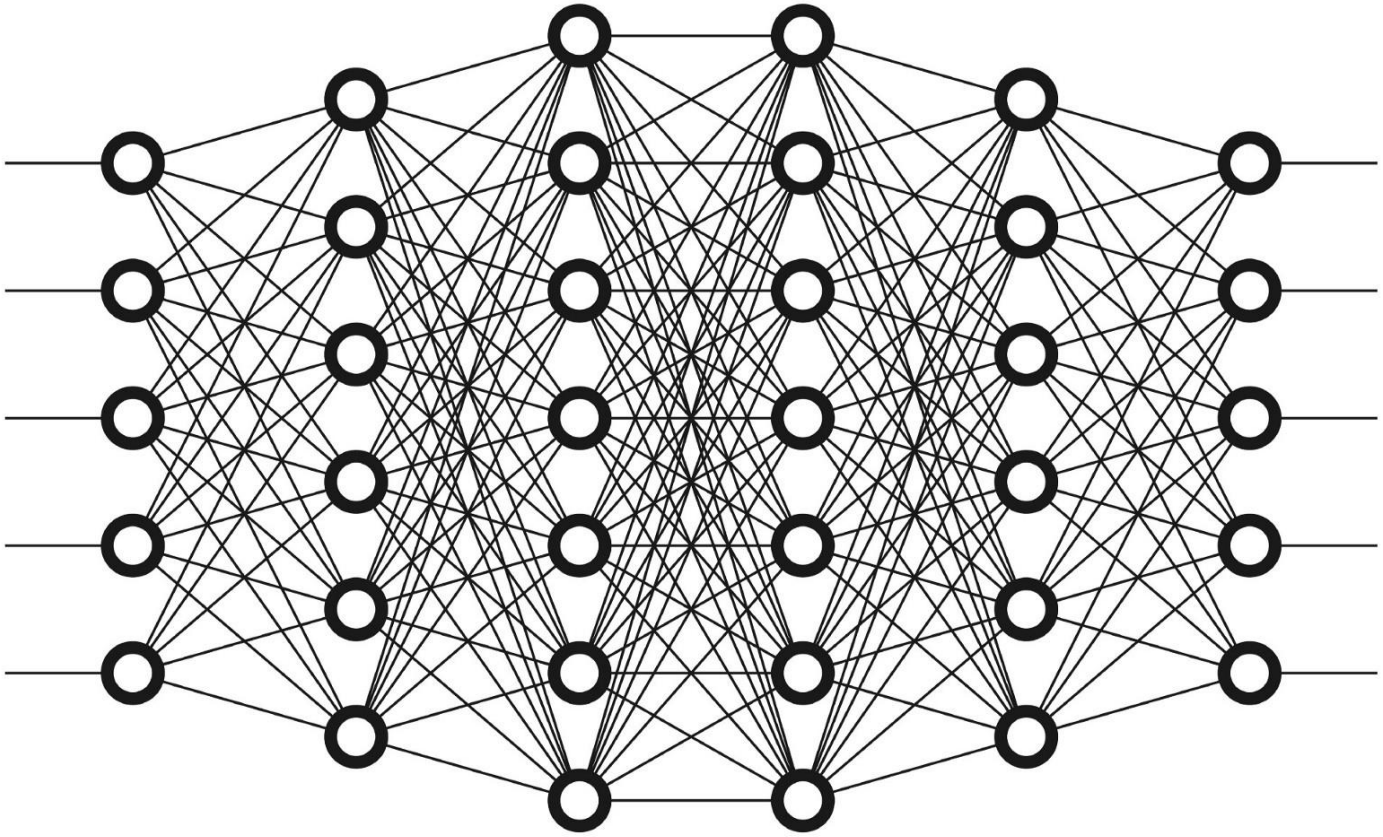

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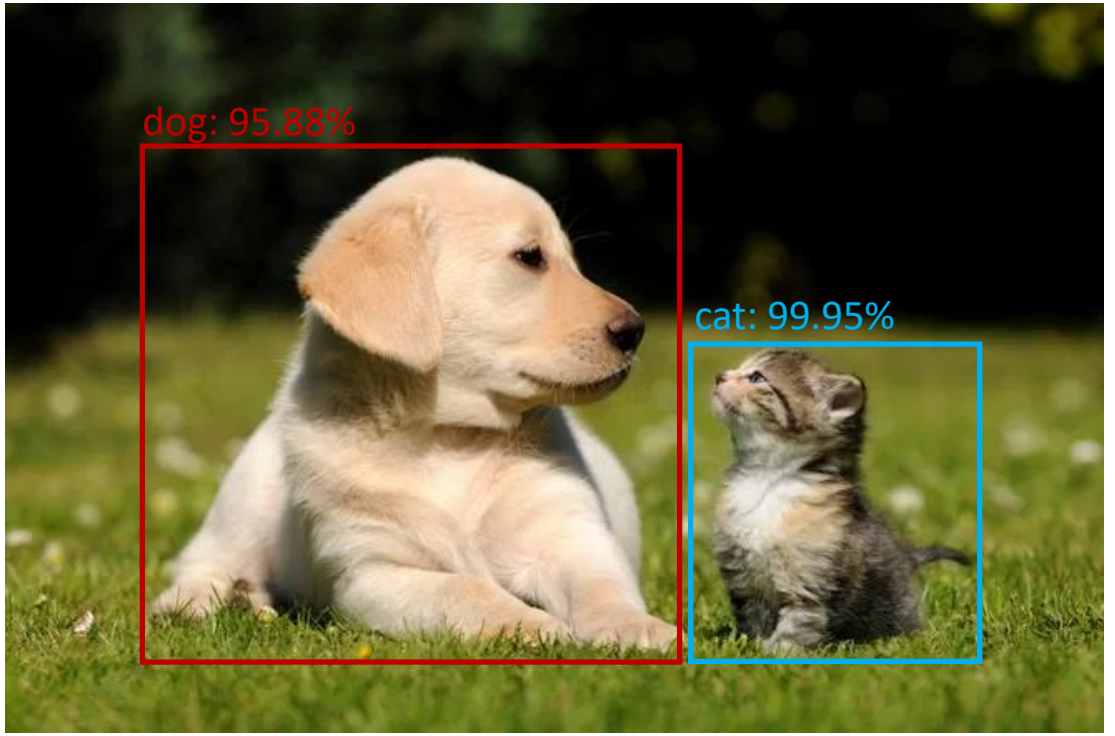
Image Recognition versus Object Detection



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Using a picture to report something

Hi!

Hi there!

I'm the Proxima city citizen bot. What can I help you with today?

I want to report an accident

Please upload a photo of the incident.

Aa

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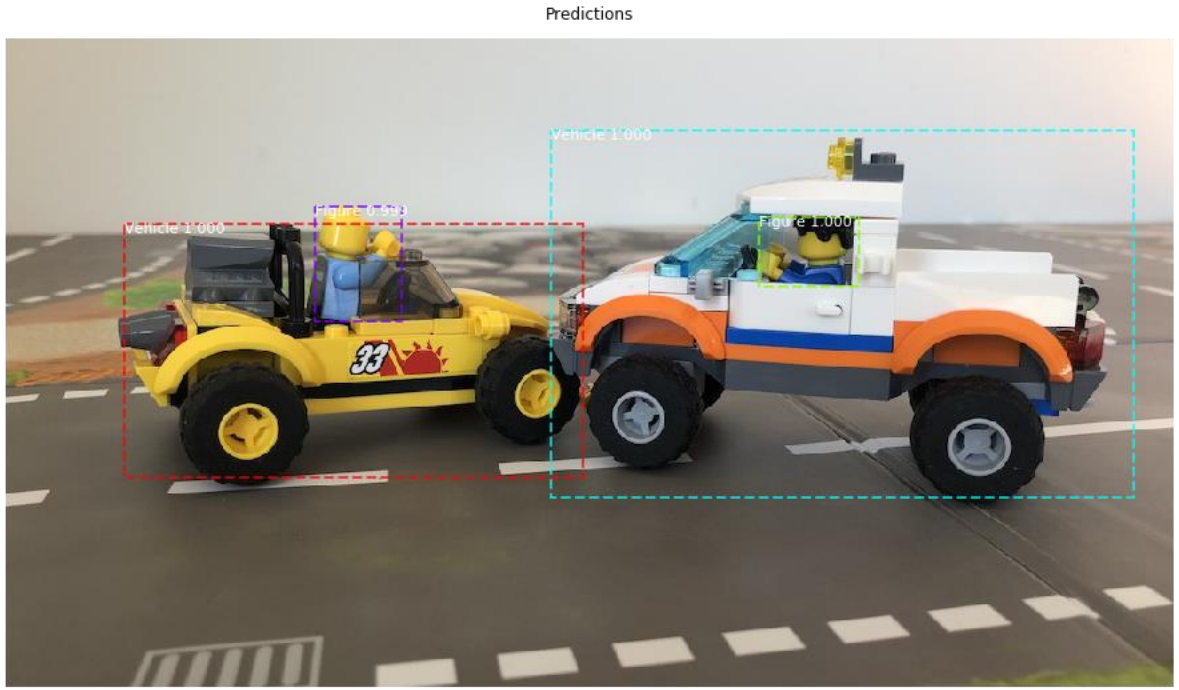
Using a picture to report something



Thank you. I can see that there are 2 vehicles and 2 Lego figures involved. Is this correct?

Yes

Thank you for reporting this. We are dispatching the resources as we speak.

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How many people are waiting on the platform?

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There are currently 8 people waiting on the platform

- How many are currently at this area?
  - Store
  - Construction site
  - etc
- Counting other objects
  - Cars passing
  - Containers
  - etc

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Identifying usage of safety equipment

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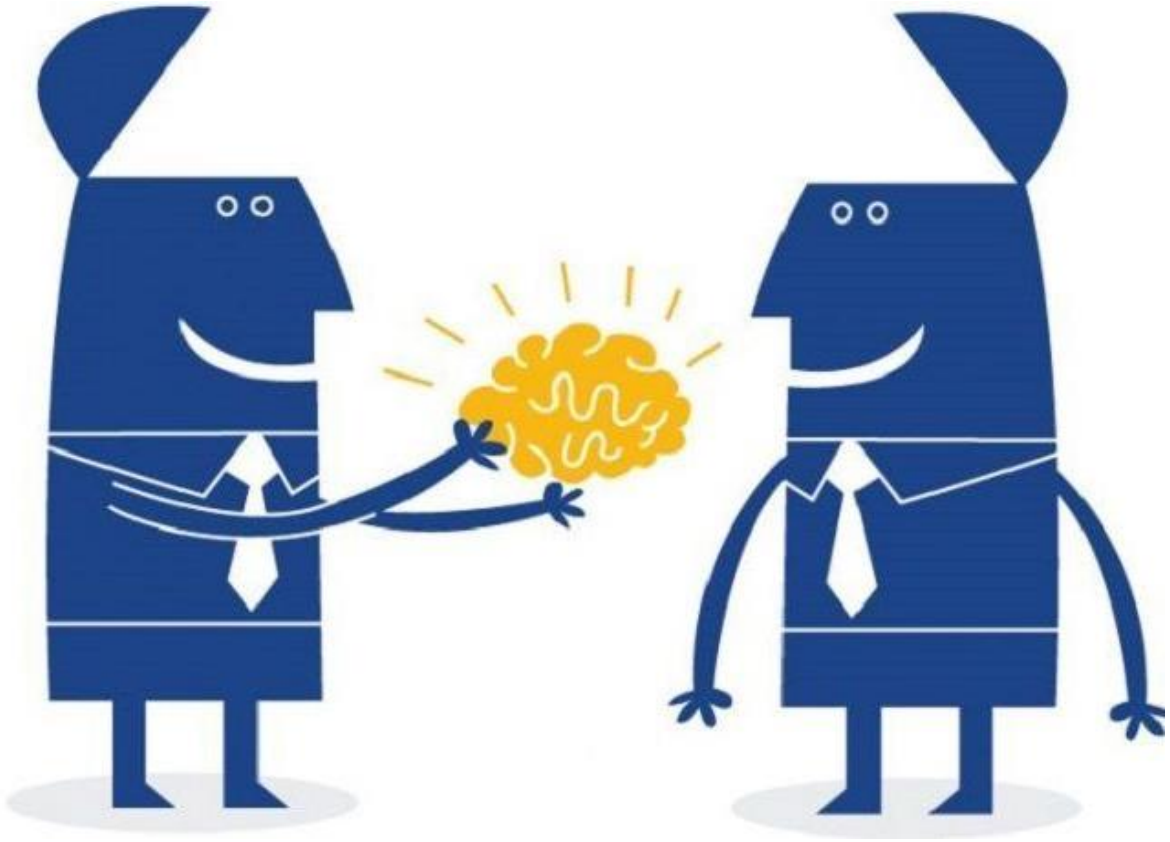
How is this done?



Transfer Learning

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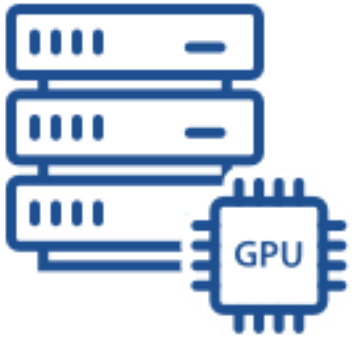
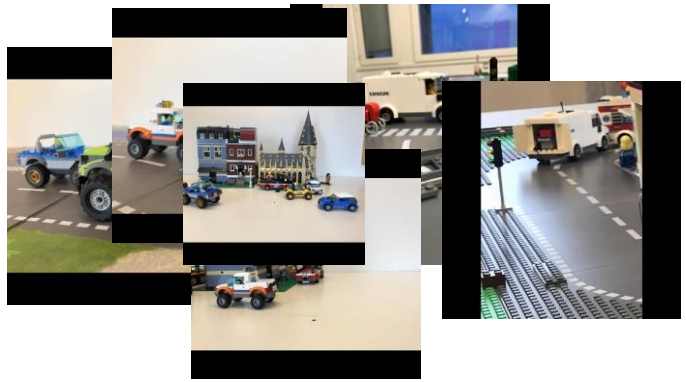
Development



TensorFlow

Object Detection API



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Why TensorFlow Object Detection API?

```
model {
(... Add model config here...)
}

train_config : {
(... Add train_config here...)
}

train_input_reader: {
(... Add train_input configuration here...)
}

eval_config: {
}

eval_input_reader: {
(... Add eval_input configuration here...)
}
```

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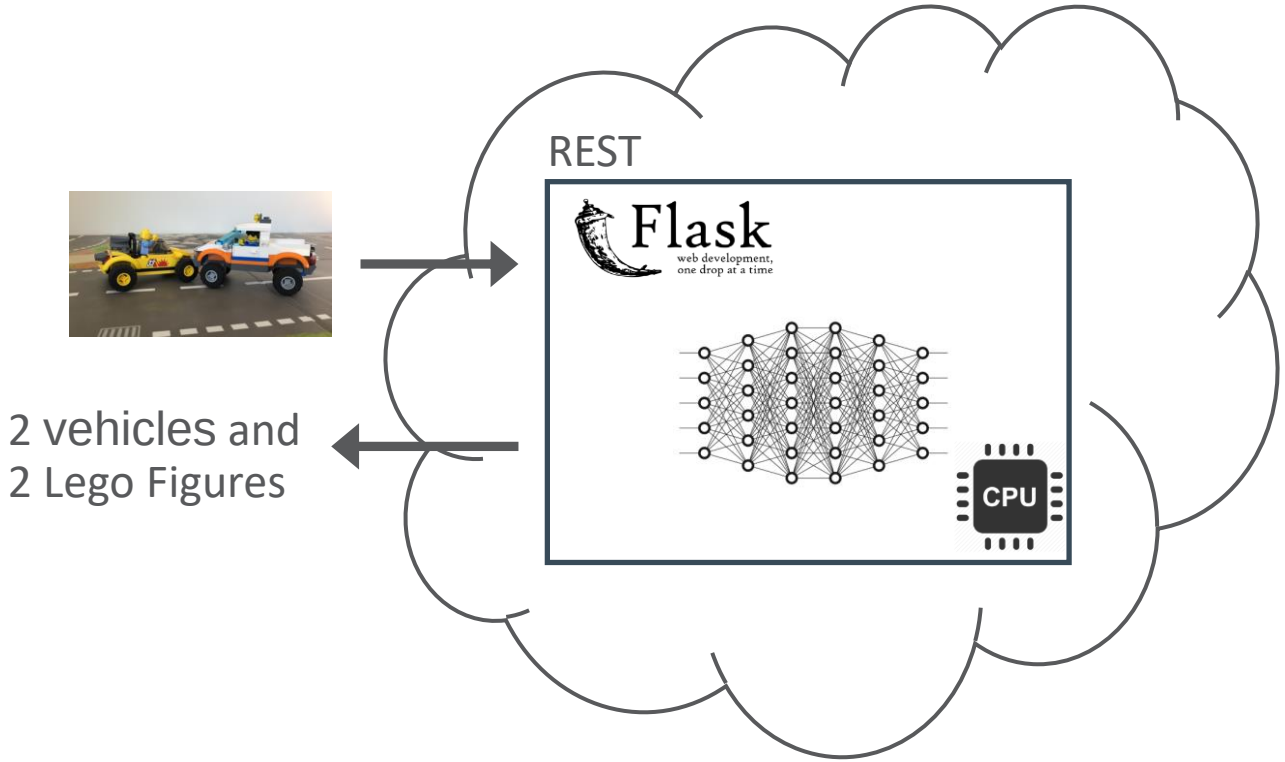
Production



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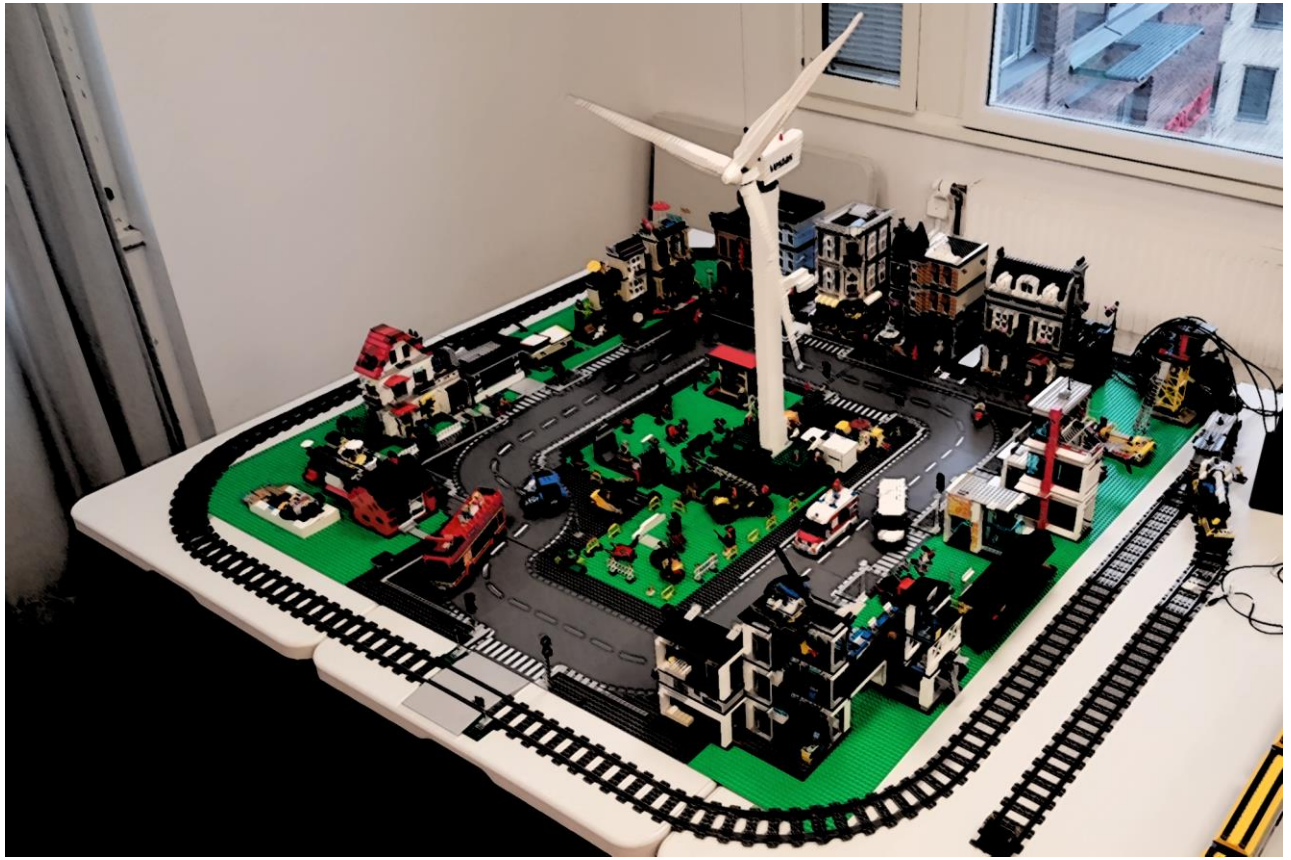
PROXIMA CITY

- A connected-city model
- To Demonstrate the power of Oracle Cloud in real smart city live examples.
- At the Oracle booth!



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Thank You

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