



TIERRA

Analytics design to support fleet management

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Summary

1. Introducing Tierra
2. Telematics data and analytics
3. Two case studies of Machine Learning applied to vehicle data



TIERRA identity

Tierra designs and develops advanced telematics & IoT solutions for geo-localization, management, maintenance and remote diagnostics of assets.



Tierra **Senior HW engineers** have designed **compact, rugged and reliable devices** able to work in extreme environmental conditions.



We do have a solution for any purpose. Tierra serves both **AM** and the **major OEMs in Construction and Agriculture**. Our applications are **highly scalable and customizable** and can adapt to **every necessity**.



Our **single-SIM solution** for **global connectivity** grants our customers freedom, flexibility and the serenity of a **fixed cost worldwide**.



TIERRA by numbers

Born in **2008** as a joint venture between **Topcon Positioning Systems** and the Italian telematics pioneer **Divitech**



110

employees
of which 70 developers



279k

assets connected so far



1.5million

vehicles data packages a day



170

Countries covered by the
assets we connect, worldwide.



WHY telematics?

Telematics enables **remote control** of **operations and assets** for any job site.

Remote diagnostics is the essential for **real-time, continuous monitoring** of assets status.

Telematics can help to **improve efficiency, reduce costs and wastes, increase profitability**, and manage your company in an easier and smarter way.

CONSTRUCTION



AGRICULTURE



SURVEYING



INTERNET of THINGS



AUTOMOTIVE





telematics data & analytics

From **vehicles data** to **fleet intelligence** and **smart maintenance**



To work only with useful and meaningful data

Starting from **spatial** and **sensor data** to collect **cleaned** and **enriched datasets**



To obtain helpful insights for your work process

Interactive dashboards to allow also non-technical users to **query** and **explore data**



To answer specific needs

Use **Machine Learning** to improve the **precision** and **customize** the analysis



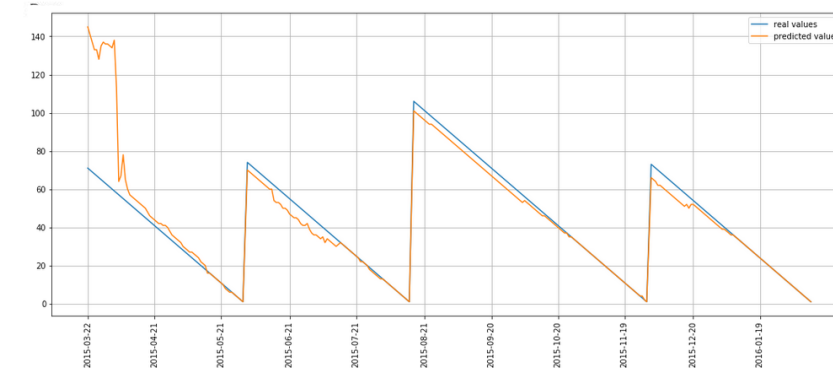
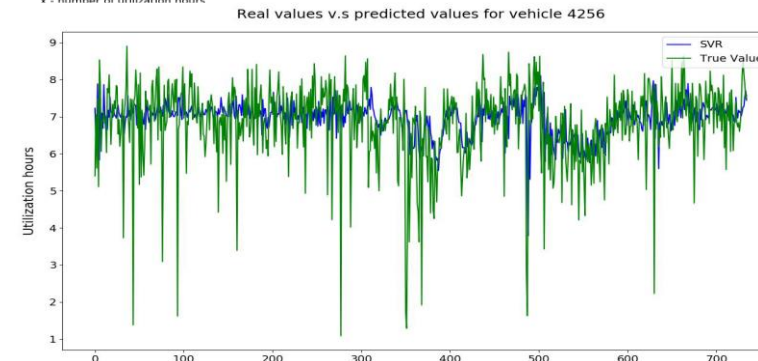
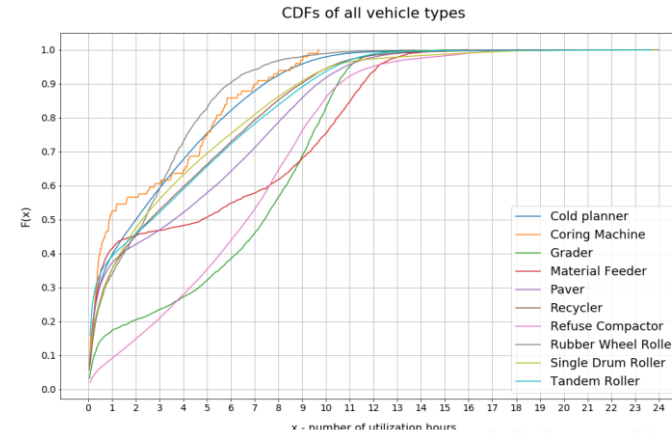
usage prediction



Vehicle usage prediction towards smarter fleet management

Applications:

- Preventive maintenance
- Suspicious behaviour
- Fleet management
- Budget planning
- Vehicle profiling





trend anomaly detection

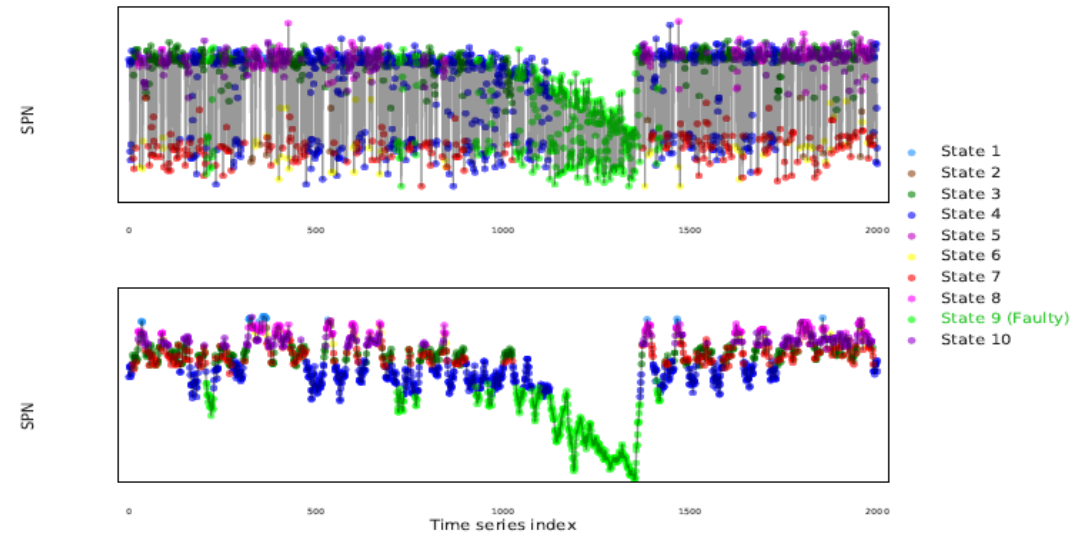


Anomaly detection to forecast
Diagnostics messages and
downtimes

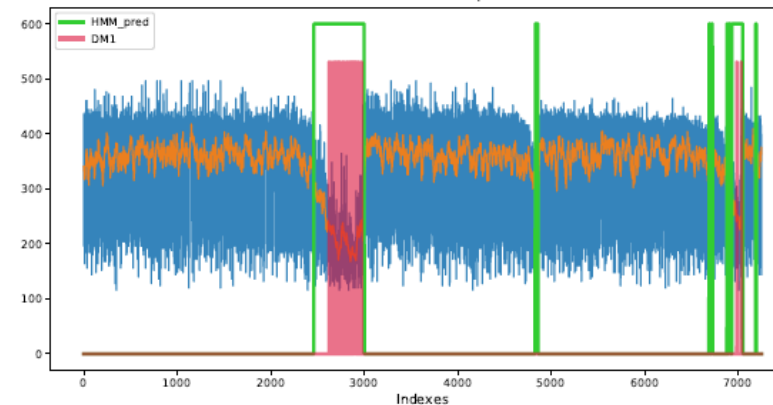
Applications:

- Predictive maintenance
- Schedule maintenance

Hidden Markov Model states prediction



Hidden Markov Model prediction





THANK YOU
FOR YOUR ATTENTION

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