Data Science: High-speed assignment – Apollo Tyres Global R&D Enschede

Who we are

Apollo Tyres is a tyre manufacturer with Indian roots. It is an ambitious and growing company, with factories in India and Europe (Netherlands and Hungary) and sales offices all over the world. In our Global R&D Centre in Enschede around 130 employees work on the development of new passenger car tyres and agricultural tyres for the brands Apollo and Vredestein. Furthermore, we have a subsidiary office in Frankfurt with around 25 employees.

Apollo Tyre Global R&D's Product Line Management (PLM) team is part of Product Development and is responsible for the development of new tyre sizes, product improvement programs and for change management in released products for European and American markets (if you look to the cars parked on the streets around you and if those cars have tyres branded as Apollo or Vredestein then most probably they have been brought to the market by your future colleagues working at the PLM department).

Problem description

- Tyres need to fulfil many requirements. The basic requirement – to pass all safety criteria – can conflict with other requirements, such as to improving the fuel economy (tyre weight, rolling resistance, etc.)
- Passing a certain high-speed threshold on an indoor drum is one of those basic requirements. The High Speed performance can be predicted using analytical and numerical tools, as well
- Improving the predictions of the High-Speed performance will have a positive effect on the tyre development process

Objective

- Apply Advanced Data Analytics to increase the accuracy of the High Speed predictions

Assignment Proposal

- Data collection, cleaning, and preparation
- Apply different Artificial Intelligence algorithms to correlate input parameters with the High Speed performance
- Sensitivity analysis of the input parameters
- Documentation and sharing of the internship results

Your profile:

- You are an enrolled Bachelor or Master of Engineering discipline
- You are available for 5-6 months
- You have a background in Data Analytics
- You have good command in English
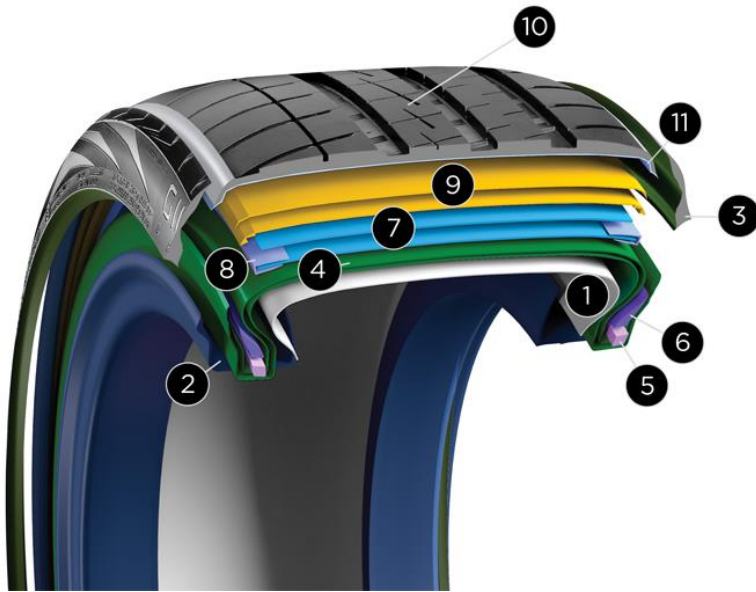- Prior experience with Python is a plus

What we offer

- Dynamic & innovative work environment
- Flat hierarchy
- Inspiring colleagues from all over the world
- Internship allowance up to EUR 400

Start date: To be decided.

ULTRAC VORTI

1. Inner liner
2. Rim cushion
3. Sidewall
4. Carcass layers
5. Bead
6. Apex
7. Belt layers
8. Gumedge
9. Nylon overhead / Cap ply
10. Tread
11. Undertread

WINTRAC PRO

1. Inner liner
2. Rim cushion
3. Sidewall
4. Carcass layers
5. Bead
6. Apex
7. Belt layers
8. Nylon overhead / Cap ply
9. Tread
10. Undertread
11. Wingtip