Realtime waiting times in the Emergency Department – Machine Learning focus

If you go to an emergency department, chances are high you need to wait. But for how long? Door2doc provides realtime information about door-to-doctor times in acute care settings (Emergency Departments and GP practices/huisartsenposten). For this, we make clever use of machine learning algorithms, realtime database connections, REST-services, cloud computing, APIs, and, most importantly: listening to what patients, nurses, physicians and healthcare managers have to tell us about their (work) experiences. Currently, we are live at the ER in Deventer hospital (see https://tiny.cc/door2doc) and we expect to connect more hospitals and GP practices in 2017.

In addition to realtime information, door2doc provides consultancy services about analysing and optimising capacity deployment for treatment rooms and staffing levels in acute care settings, as well as future projections through computer simulations. We also provide integrated analyses of the organisation of care and healthcare delivery processes.

We are looking for smart, determined people

We are looking for smart, determined people who like to contribute to the door2doc project (Machine Learning focus). There are several topics available for you to craft your own MSc project:

1. Improving current prediction performance and expanding the scope (waiting times, arrivals, hospital admission) and functionality to include other features and data sources (eg weather)
2. Developing and implementing a (deep) neural network for realtime predictions using Spark and Deepjearning4j in our cloud
3. Developing new prototypes for realtime forecasts of capacity usage, and testing these on location in real life
4. Data analysis, visualisations and clustering
5. Expanding functionality and connectivity of our APIs and connecting to Internet of Things

Student requirements

- You have an independent and proactive attitude and an interest in healthcare
- Knowledge and skill in developing and applying machine learning algorithms (batch and incremental) and evaluating prediction performance (e.g., Weka, Sci-kit learn, R, Spark)
- Programming experience (e.g. Python, Java, Javascript)
- You are skilled at handling and visualising datasets (R, Python, Tableau, Grafana)

Work location

- We have work places available in Maarssen, close to the railway station
- Occasionally work might take place on location such as Deventer hospital and other hospitals/GP practices in the (west of the) Netherlands
- You will join our team (developers and designer) in Slack, so we can easily communicate, giving you maximum flexibility

Interested?

- Please contact dr ir Remco Rosmulder at Door2doc BV: 06-51413959, remco@door2doc.com
- See also www.door2doc.com and http://www.linkedin.com/company/door2doc-bv