# Job Description

| Position Title: Data Scientist/Machine Learning Researcher  
| Location: Analytics & Big Data, Teva Innovative R&D, Netanya, Israel and Center for the Study of Movement, Cognition, and Mobility, Tel-Aviv Sourasky Medical Center (TASMC), Israel.  
| Reports to Lena Granovsky (Teva) & Jeff Hausdorff (TASMC)  
| Time period: Full time position starting Q1/19, duration approximately 2 years  

## General description of the project
Optimal treatment of impaired mobility that results from ageing and chronic disease is one of the 21st century's greatest challenges facing patients, society, governments, healthcare services, and science. New interventions are a key focus, however, to accelerate their development, we need better ways to detect and measure mobility loss. Digital technology, including body worn sensors, has the potential to revolutionize mobility assessment. The overarching objectives of MOBILISE-D are: to deliver a valid solution (consisting of sensor, algorithms, data analytics, outcomes) for real world digital mobility assessment; to validate digital outcomes in predicting clinical outcome in four different medical conditions; and, to obtain key regulatory and health stakeholder approval for digital mobility assessment.

The postdoctoral researcher will be part of a collaborative group of academic and industry professionals aiming to produce a validated ‘single device location-algorithm pair’ and associated technical, clinical and patient specific standards for clinical validation. Current state of the art modelling of human gait will be combined with advanced processing techniques to exploit data from these complementary sensing technologies to increase the specificity and accuracy of algorithms.

## Specific areas of responsibility
- Evidence synthesis, outcome definitions & consensus: literature review, identify & synthesize digital mobility metrics
- Algorithm consolidation & development: identify, develop, refine & implement digital mobility algorithms
- Algorithm (digital mobility outcomes) validation in patients: define protocol and tools for technical clinical validation, seeking ethics approval and patient recruitment
- Protocols, standards and manuals: produce documentation of digital mobility algorithms and outcomes

## Required qualifications
- Education: PhD or MSc
- Experience:
  - Proven track record in data mining, exploration and algorithmic model development, including predictive analytics
  - Expert knowledge and theoretical understanding of machine learning, pattern recognition, and big data
- Working knowledge of scripting and programming languages relevant for advanced analytics such as Python, R, and Java
- Hands on experience with SQL
- Knowledge and experience in Deep Learning is an advantage
- Applied technical experience in advanced analytics, visualization and computational modelling, big data (Hadoop/Spark, AWS), search and various data integration tools is an advantage
- Capabilities:
  - Ability to solve complex problems using creative ideas, state-of-the-art tools and best engineering practice
  - Excellent written and verbal communication skills, in both English and Hebrew
- Life sciences background or education is an advantage

Interested individuals should contact:

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