Vitality Data Center project

Department: Human Geography and Spatial Planning
Supervisors: Dr Zhiyong Wang
               Prof. Dick Ettema
Email addresses: z.wang2@uu.nl
                   D.F.Ettema@uu.nl
Telephone numbers: +31 30 253 5324
                   +31 30 253 2918

Project description

With the rapid advance of information communication technologies (ICTs), we have entered into the era of “Big Data”. Unprecedented volumes of geospatial data have been generated and provided us with new pathways to conduct multidisciplinary research on promoting health and vitality. By joining efforts of researchers from Utrecht University and TU Eindhoven, we are conducting a project, called the Vitality Data Centre, which focuses on developing new ideas and tools that support research on vitality and facilitate the multidisciplinary collaboration between both universities.

For the VDC project, the involved students will support project researchers in developing tools/models that examine the relationship between physical activity (PA) and built environments at different geopolitical levels (municipal, regional or national). Depending on personal interests and skills, student assistants can choose and work on one or more following tasks, 1). Using various behavioral data (such as GPX tracking data and travel survey data) to analyze different types of physical activity, such as biking, walking, and running; 2). Developing tools to extract relevant information from data on sociocultural and physical environments; 3). Exploring a wide range of environmental data (e.g., traffic count, noise data, air pollution index), and developing new factors that are related to PA; 4). Developing approaches to correlate behavioral factors with environmental indicators; 5). Testing and validating the developed tools and models to find out which indicators are most suited to explain the impact of environment on specific forms of PA.
Job requirements

Students who meet the following prerequisites are very welcome to join the project: 1). Fun with software developments; 2). Good knowledge of GIS, python and geo-database (Postgresql/PostGIS); 3). Independence, flexibility and team spirit. Knowledge on spatial statistics and Linux would be a big plus. The involved student assistants will join a multidisciplinary research team and meet researchers with different backgrounds. They will also have opportunities to learn state of the art technologies (for example, big geo-data computation technique, and artificial intelligence/deep learning technique) and gain experience of using them to address cutting edge research issues. Have we aroused your interest? For more information, please email us with your interests and a brief overview of IT/methods skills.