# Mendel University in Brno

GIS HUMAN BEHAVIOR MIGRATION RESILIENCE AUGMENTED REALITY NATURAL LANGUAGE PROCESSING LOCATION BASED SERVICES ENVIROMENTAL CHANGES MOBILE TECHNOLOGIES VIRTUAL REALITY

## **SPATIAL HUB**

DECISION MAKING BASED ON SPATIAL DATA ANALYSIS

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### **SMART UNIVERSITY SMART ENVIRONMENT**

Improving a city, town or even a company is not easy. It requires the participation of many people. Our work focuses on technical solutions that can make life easier for different communities of people in a university, company or city environment.

Our research is based on three pillars. The first pillar are mobile, augmented and virtual reality applications that provide information to the users. The second pillar are the sensory networks obtaining environmental data. The third pillar is the location analysis that pairs the user with the right information.

#### **CLIMATE CHANGE, RESILIENCE AND** POPULATION DYNAMICS

One of the biggest challenges for "Western societies" in the last decade is the massive migration. In order to make a meaningful attempt to give rules to immigration. its causes must be understood. In many cases, there are a number of interrelated factors dealing with development, remittances, and other economic and social factors.

We survey the perception, resilience and adaptation strategies of households in Asia, Europe and Africa affected by the effects of environmental changes and other factors and their impact on population dynamics.



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#### **SMART MIGRATION**

#### https://smartmigration.cz

We provide effective support to immigrants in the Czech Republic who find themselves in difficult personal situations through innovative mobile and web applications with personalized support for immigrants from the former Soviet Union countries. User-friendly application and digital assistant based on natural language processing can help them in complex life situations and also facilitate their integration in the Czech Republic.

The second objective of the project is the analysis of key socio-demographic immigration issues. The results can be applied in the development of public policies, strategic materials, and other appropriate tools for their application.



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