

# Mobile Microservice Architecture for Patients Self-Care

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The proposed health self-care IT system consists of the mobile based microservices built on the principles of Service Oriented Architecture. The turning of the traditional backend-frontend architecture upside-down leads to simplicity in developing the basic services for patients' sensors data collection and in developing value add health self-care services on the top of the basic services.

This development is enabled by the current computing, communication, LTE, and storage capacities of the state-of-the-art mobile phones. The state-of-the-art mobile phones have an extensive set of various sensors and possibilities to extend to Bluetooth based sensors. Especially in the context of the health self-care, various microservices can be created for the each of the factors that are asked to be measured e.g. steps taken. Each basic service communicates the with other services by employing RESTful web service architecture.

One of the advantages of this systems is that there is no need for any cloud based storages as the data is many times sensitive in health care. The other clear benefit is the real time or near real time follow of the condition of the patient remotely. Also, the microservice architecture allows developing various services rather independently as the interfaces are well defined.

This type of an arhitecture leads to the simplified patient user interface fitting for Parkinson patients. The basic principles of the system have been tested on an Android based mobile phone acting as a server and a laptop acting as a client. Various other configuration has also been investigated.

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