Digital Health

INVENTION DESCRIPTION

Technologies for the diagnosis through **multi-modal processing and data analysis** (i.e. from different sources such as image, audio, biomarkers, genomic sequences, clinical data, etc.) for **search and identification of relevant physiological or pathological patterns.**

Technologies and techniques for **patient stratification** by analyzing data from electronic health record (EHR) combined with environmental, demographic, genomics, epigenomics or metabolomics data.

Predictive models for anticipating the disease evolution in a patient for prediction of the patient response to a drug or for anomaly detection.

Optimization techniques for the adjustment of the working parameters depending on the objectives to maximize.

Methods and techniques for verification and validation (for CE marking) of computer applications used in health, both for mobile devices and desktop.

Predictive maintenance techniques of health devices and equipment based on real time analysis of performance data.

Servitization technologies for automatic scaling of software and systems enabling cost reduction in terms of accessibility, operation and maintenance of systems.

3D technology for quality control (dimensional, surface and volumetric defects) in parts and **implants**.

APPLICATION SECTORS

These technologies have application in the health domain and can influence in different sectors that are part of its value chain such as:
- Health sector.
- ICT Sector.
- Biotechnology sector.
- Pharma industry, both manufacturing and distribution.
- Agri-food industry

All companies, entities or bodies that are generating business in this area will benefit from these technologies. For example, the pharmaceutical industry will have a larger market through new personalized drugs. The distribution of medicines sector will also be strengthened and will have a greater turnover potential. Biomedical sector companies that offer these technologies will also have competitive advantage in the market. It will also impact on ICT or IT companies that can generate development projects and / or services in that domain to move forward with the introduction of personalized medicine, precision medicine, ...

There is also great potential for interaction with the food industry. The so-called functional food, which is a version of personalized medicine in the food environment, will be based in the future in the knowledge of our deficiencies or our food assimilation capabilities and the production of adequate food to our custom profile.

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TECHNICAL ADVANTAGES AND BUSINESS BENEFIT

The technology offers the following advantages and benefits:

- More precise and agile diagnostics, because they allow the automation of parts of the process and reduce the time that a medical specialist must use to review the evidence.

- Establishment of preventive therapies of diseases or their evolution, so that the evolution slows on the scale of disease (multimorbidity) and the consequent cost associated with that level.

- Reducing waiting times at hospitals due to better planning of operations to be performed. Reducing unexpected downtime for equipment maintenance.

- Increased effectiveness of drugs due to its higher personalization.

- Zero defects in parts and implants, improving clinician and patient satisfaction.

TECHNOLOGY MATURITY LEVEL

Own algorithms and techniques developed and implemented by the Instituto Tecnológico de Informática in collaboration with leading agents in Valencian health system.

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COLLABORATION SOUGHT

Companies interested in cooperation in the following ways:

- Collaboration agreement for the incorporation of digital technologies for health inside the company solutions portfolio.
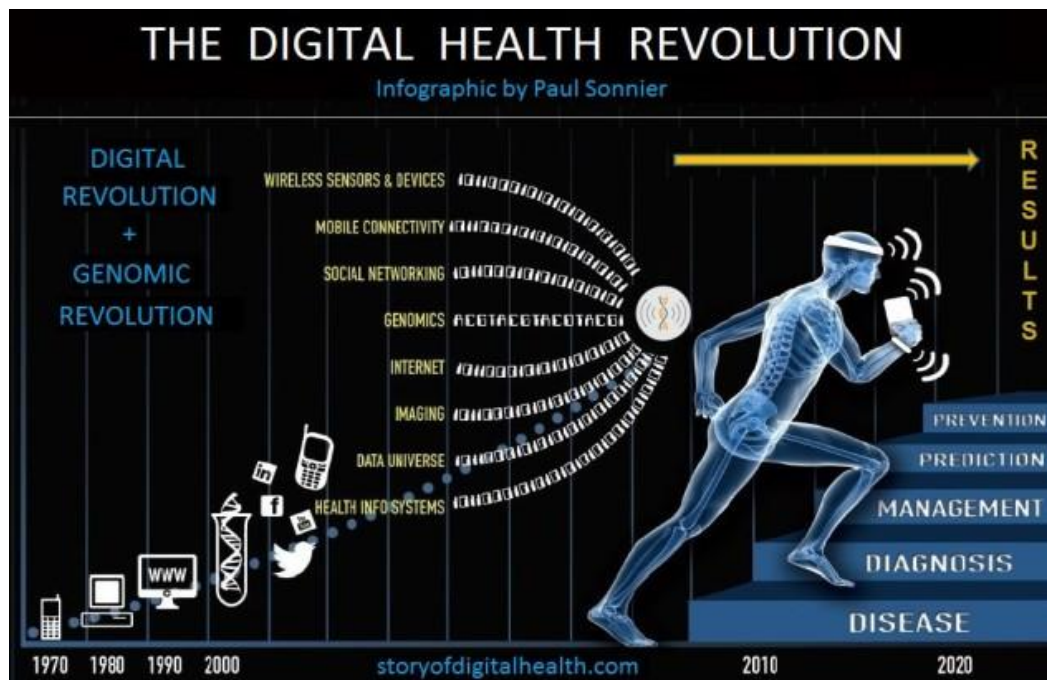
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Digital Health

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